

Sequence Listing

<110> Ashkenazi, Avi J.
Baker, Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan L.
Ferrara, Napoleone
Fong, Sherman
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Kljavin, Ivar J.
Napier, Mary A.
Pan, James
Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
Tumas, Daniel
Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
Zhang, Zemin

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<213> Homo sapiens

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Leu	Gly	Leu	Ile	Ser	Pro	Ala	Tyr	Leu	Phe	Leu	Trp	Pro	Glu	Ala
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Phe	Asp	Gly	Arg	Pro	Ala	Asp	Tyr	Leu	Phe	Met	Leu	Leu	Phe	Asn
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Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
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Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
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Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
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His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
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Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
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Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
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<212> DNA

<213> Homo sapiens

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 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
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 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
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Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
				185					190					195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	
				200					205					210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	
				215					220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
				230					235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
				245					250					255	
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				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
				275					280					285	
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Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	
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<211> 424

<212> PRT

<213> Homo sapiens

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Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
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Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
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Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85					90
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
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Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
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Ala Met Ala Val	Ile Phe Ser Asn Phe Ser	Ile Ile Thr Thr	Ala
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His His Asp Ala	Phe Phe Ser Pro Ser Asn	Ser Cys Leu Leu	Phe
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys	Thr Ala Lys Glu	Trp
	200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr	Ala Arg Val Phe	Ser
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val Leu	Ile Ile Val Gln	Cys
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn	Glu Lys Ile Leu	Lys
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Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe	Ile Gln Asn Ser	Lys
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly	Leu Thr Leu Gly	Leu
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Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys	Phe Leu Asp Asn	Met
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Phe His Val Leu	Met Ala Gln Val Thr Thr	Val Ile Ile Thr	Thr
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Val Ser Val Leu	Val Phe Asp Phe Arg Pro	Ser Leu Glu Phe	Phe
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Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro	Arg Gln Glu Arg	Ile
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<212> DNA
<213> Homo sapiens

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<210> 18
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<211> 2142

<212> DNA

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ctggcagtggt ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcca tttctcatct tggtagccct catggagagt 1300
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtggtgc 1350
 agctgccttc ttactaccct ggtccatgct gcctgatgtc attgacgact 1400
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 cggaacgtgt caagtttaca ctgaacatgc tctgacctat ggctcccata 1600
 gttctcatcc tgctgggctt gctgctcttc aaaatgtacc ccattgatga 1650
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700
 ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750
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 gggatcagga cctgtctgcc ggcttctgta gcagctggac tgcaggtgct 1850
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 cactgtgggg ccggtgtctc tgtggcctcc tgcctcccct ctgcctgcct 1950
 gtggggccaa gccctggggc tgccactgtg aatatgcaa ggactgatcg 2000
 ggcctagccc ggaacactaa ttagaaaacc ttttttttac agagcctaata 2050
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
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<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
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 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu	110	115	120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln	125	130	135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala	140	145	150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu	155	160	165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile	170	175	180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln	185	190	195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe	200	205	210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu	215	220	225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu	230	235	240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn	245	250	255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu	260	265	270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys	275	280	285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile	290	295	300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val	305	310	315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro	320	325	330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln	335	340	345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val	350	355	360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr	365	370	375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln	380	385	390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala	395	400	405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr	410	415	420

Pro	Ile	Asp	Glu	Glu	Arg	Arg	Arg	Gln	Asn	Lys	Lys	Ala	Leu	Gln
			425						430					435
Ala	Leu	Arg	Asp	Glu	Ala	Ser	Ser	Ser	Gly	Cys	Ser	Glu	Thr	Asp
			440						445					450
Ser	Thr	Glu	Leu	Ala	Ser	Ile	Leu							
			455											

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
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 accctatgaa gccacgcagt ctgagccaat cgcctacttc cggggcctac 150
 ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200
 ttcacctcct tggttttcat gctggtgag gggaaacttg tcttgttttg 250
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctctggcca 300
 tcatgtcttc ggccacttta accattccca tctggcagtg gttcttgacc 350
 cggtttgcca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450
 cggtagctgt ggagctggc atcagtgtag cagctgcctt cttactaccc 500
 tggtcacatg tcctgatgt cattgacgac ttccatctga agcagcccca 550
 cttccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
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 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
 cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
 cattactgca gtaacactcc accatataga cccggcttta cttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
 ctgcgcttgc acttggaata ctgagttggt taggaacttc tattgtggca 450

aacttcaga aaacaaccot ttttgctgca catgtaagtg gagctgtgct 500
taccttttgg atgggctcat tatatatgtt tgttcagacc atccttttcc 550
acccaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctggtgtgg agtaagtgca cttagcatgc tgacttgctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaacco cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
gcagaatggt ctatgtcatt ttccttcttt ggttttttcc tgactttacat 800
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
taacctctta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
ctactttcca gagatatttg atgaaaggat aaaatatctt tgtaatgatt 950
atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23

<211> 266

<212> PRT

<213> Homo sapiens

<400> 23

Met	Trp	Trp	Phe	Gln	Gln	Gly	Leu	Ser	Phe	Leu	Pro	Ser	Ala	Leu
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Val	Ile	Trp	Thr	Ser	Ala	Ala	Phe	Ile	Phe	Ser	Tyr	Ile	Thr	Ala
				20					25					30
Val	Thr	Leu	His	His	Ile	Asp	Pro	Ala	Leu	Pro	Tyr	Ile	Ser	Asp
				35					40					45
Thr	Gly	Thr	Val	Ala	Pro	Glu	Lys	Cys	Leu	Phe	Gly	Ala	Met	Leu
				50					55					60
Asn	Ile	Ala	Ala	Val	Leu	Cys	Ile	Ala	Thr	Ile	Tyr	Val	Arg	Tyr
				65					70					75
Lys	Gln	Val	His	Ala	Leu	Ser	Pro	Glu	Glu	Asn	Val	Ile	Ile	Lys
				80					85					90
Leu	Asn	Lys	Ala	Gly	Leu	Val	Leu	Gly	Ile	Leu	Ser	Cys	Leu	Gly
				95					100					105
Leu	Ser	Ile	Val	Ala	Asn	Phe	Gln	Lys	Thr	Thr	Leu	Phe	Ala	Ala
				110					115					120
His	Val	Ser	Gly	Ala	Val	Leu	Thr	Phe	Gly	Met	Gly	Ser	Leu	Tyr
				125					130					135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	140	145	150
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	155	160	165
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	170	175	180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	185	190	195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	200	205	210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	215	220	225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	230	235	240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	245	250	255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile					260	265	

<210> 24
 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 14, 484
 <223> unknown base

<400> 24
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 gaggcgagat cctcaaacgg cctagtgtctt cgcgcttccg gagaaaaatca 150
 gcggtctaata taattctctt ggtttggtga agcagttacc aagaatcttc 200
 aaccctttcc cacaaaagct aattgagtac acgttcctgt tgagtacacg 250
 ttccgtgttga tttacaaaag gtgcaggtat ggcaggtct gaagactaac 300
 attttgtgaa gttgtaaaac agaaaacctg ttgaaatgt ggtggtttca 350
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
 ctttcataatt ttcatacatt actgcagtaa cactccacca tatagacccg 450
 gctttacctt atatcagtga cactgggtaca gtanc 485

<210> 25
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe
 <400> 25
 acctgttaga aatgtggtgg tttcagcaag gcctcagttt 40

<210> 26
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe
 <400> 26
 ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
 <211> 1399
 <212> DNA
 <213> Homo sapiens

<400> 27
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 ctgccccgcg ggccgggggtg cggagccgac atgcgccgc ttctcggcct 100
 ccttctggtc ttcgccggct gcaccttcgc cttgtacttg ctgtcgacgc 150
 gactgcccg cgggcggaga ctgggctcca ccgaggaggc tggaggcagg 200
 tcgctgtggt tccccctcga cctggcagag ctgcgggagc tctctgaggt 250
 ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
 gcggcgcccta cctctacaaa cagggctttg ccatccccgg ctccagcttc 350
 ctgaatgttt tagctgtgct cttgttttgg ccatggctgg ggcttctgct 400
 gtgctgtgtg ttgaacctcg tgggtgccac atgctgctac ctgctotcca 450
 gtattttttg caaacagttg gtggtgtcct actttctcga taaagtggcc 500
 ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt tttttttctt 550
 attgtttttg agacttttcc ccatgacacc aaactggttc ttgaacctct 600
 cgcccccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650
 atcggtttga tccatataa ttcatctgt gtgcagacag ggtccatcct 700
 gtcaacccta acctctctg atgctctttt ctctgggac actgtcttta 750
 agctgttggc cattgccatg gtggcattaa ttcttggaac cctcattaaa 800
 aaatttagtc agaacaatct gcaattgaat gaaacaagta ctgctaata 850
 tatacacagt agaaaagaca catgatctgg attttctggt tgccacatcc 900
 ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagccct 950
 cattgttttt gattgccttc tataggtgat gtggacactg tgcataatg 1000

tgcagtgtct tttcagaaag gacactctgc tcttgaaggt gtattacatc 1050
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 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	
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Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	
				20					25					30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	
				35					40					45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	
				50					55					60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	
				65					70					75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	
				80					85					90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	
				95					100					105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	
				110					115					120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	
				125					130					135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	
				140					145					150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	
				155					160					165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	
				170					175					180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	
				185					190					195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	
				200					205					210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
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 gggttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaaactt 200
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctcagagacc ccccccgag tatcctctcc ttatagttgt gtataagggtt 350
 ctcgcaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600
 agtcagagcc cattcctgcc aactgcactg gctgtgcca gaaacacctg 650
 aagggtgatg tcctggaaga cgcaccaagg aaatttgaga ggctccatcc 700
 actggtgato aagacgggaa agcccctgtt ggaggaagag attcagcatt 750
 ttttgtcca gtaccctgag gcgacagaag gcttctctga aggggttttc 800
 gccaaagtgt ggcgctgctt tcctgagcgg tggttcccat ttccattacc 850
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 gatatcggtc atgtcgacac caccactgg aaggctctac ttatagccag 1150

aggggtccag cctttggtca tctgcgatgg aaccgctttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccagggtt 1250
 gaaaggggaa aaataaaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
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 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
				260					265					270
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
				275					280					285
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttgggtgagac agaccggcc tcaagtgtggc atgtcagaga aggcaattga 300
 aaaatttato agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaattcttg tcactgccta ctttgtgatt caacctttca gccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
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<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

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Met	Ser	Gly	Phe	Trp	Asn	Ala	Cys	Tyr	Asp	Met	Leu	Met	Ser	Ser
				20					25					30

Gly	Gln	Arg	Arg	Gln	Trp	Glu	Arg	Ala	Gln	Ser	Arg	Arg	Ala	Phe
				35					40					45

Gln	Glu	Leu	Val	Leu	Glu	Pro	Ala	Gln	Arg	Arg	Ala	Arg	Leu	Glu
				50					55					60

Gly	Leu	Arg	Tyr	Thr	Ala	Val	Leu	Lys	Gln	Gln	Ala	Thr	Gln	His
				65					70					75

Ser	Met	Ala	Leu	Leu	His	Trp	Gly	Ala	Leu	Trp	Arg	Gln	Leu	Ala
				80					85					90

Ser	Pro	Cys	Gly	Ala	Trp	Ala	Leu	Arg	Asp	Thr	Pro	Ile	Pro	Arg
				95					100					105

Trp	Lys	Leu	Ser	Ser	Ala	Glu	Thr	Tyr	Ser	Arg	Met	Arg	Leu	Lys
				110					115					120

Leu	Val	Pro	Asn	His	His	Phe	Asp	Pro	His	Leu	Glu	Ala	Ser	Ala
				125					130					135

Leu	Arg	Asp	Asn	Leu	Gly	Glu	Val	Pro	Leu	Thr	Pro	Thr	Glu	Glu
				140					145					150

Ala	Ser	Leu	Pro	Leu	Ala	Val	Thr	Lys	Glu	Ala	Lys	Val	Ser	Thr
				155					160					165

Pro	Pro	Glu	Leu	Leu	Gln	Glu	Asp	Gln	Leu	Gly	Glu	Asp	Glu	Leu
				170					175					180

Ala	Glu	Leu	Glu	Thr	Pro	Met	Glu	Ala	Ala	Glu	Leu	Asp	Glu	Gln
				185					190					195

Arg	Glu	Lys	Leu	Val	Leu	Ser	Ala	Glu	Cys	Gln	Leu	Val	Thr	Val
				200					205					210

Val	Ala	Val	Val	Pro	Gly	Leu	Leu	Glu	Val	Thr	Thr	Gln	Asn	Val
				215					220					225

Tyr	Phe	Tyr	Asp	Gly	Ser	Thr	Glu	Arg	Val	Glu	Thr	Glu	Glu	Gly
				230					235					240

Ile	Gly	Tyr	Asp	Phe	Arg	Arg	Pro	Leu	Ala	Gln	Leu	Arg	Glu	Val
				245					250					255

His	Leu	Arg	Arg	Phe	Asn	Leu	Arg	Arg	Ser	Ala	Leu	Glu	Leu	Phe
				260					265					270

Phe Ile Asp Gln	Ala Asn Tyr Phe Leu	Asn Phe Pro Cys Lys	Val
	275	280	285
Gly Thr Thr Pro	Val Ser Ser Pro Ser	Gln Thr Pro Arg Pro	Gln
	290	295	300
Pro Gly Pro Ile	Pro Pro His Thr Gln	Val Arg Asn Gln	Tyr
	305	310	315
Ser Trp Leu Leu	Arg Leu Arg Pro Pro	Ser Gln Gly Tyr Leu	Ser
	320	325	330
Ser Arg Ser Pro	Gln Glu Met Leu Arg	Ala Ser Gly Leu Thr	Gln
	335	340	345
Lys Trp Val Gln	Arg Glu Ile Ser Asn	Phe Glu Tyr Leu Met	Gln
	350	355	360
Leu Asn Thr Ile	Ala Gly Arg Thr Tyr	Asn Asp Leu Ser Gln	Tyr
	365	370	375
Pro Val Phe Pro	Trp Val Leu Gln Asp	Tyr Val Ser Pro Thr	Leu
	380	385	390
Asp Leu Ser Asn	Pro Ala Val Phe Arg	Asp Leu Ser Lys Pro	Ile
	395	400	405
Gly Val Val Asn	Pro Lys His Ala Gln	Leu Val Arg Glu Lys	Tyr
	410	415	420
Glu Ser Phe Glu	Asp Pro Ala Gly Thr	Ile Asp Lys Phe His	Tyr
	425	430	435
Gly Thr His Tyr	Ser Asn Ala Ala Gly	Val Met His Tyr Leu	Ile
	440	445	450
Arg Val Glu Pro	Phe Thr Ser Leu His	Val Gln Leu Gln Ser	Gly
	455	460	465
Arg Phe Asp Cys	Ser Asp Arg Gln Phe	His Ser Val Ala Ala	Ala
	470	475	480
Trp Gln Ala Arg	Leu Glu Ser Pro Ala	Asp Val Lys Glu Leu	Ile
	485	490	495
Pro Glu Phe Phe	Tyr Phe Pro Asp Phe	Leu Glu Asn Gln Asn	Gly
	500	505	510
Phe Asp Leu Gly	Cys Leu Gln Leu Thr	Asn Glu Lys Val Gly	Asp
	515	520	525
Val Val Leu Pro	Pro Trp Ala Ser Ser	Pro Glu Asp Phe Ile	Gln
	530	535	540
Gln His Arg Gln	Ala Leu Glu Ser Glu	Tyr Val Ser Ala His	Leu
	545	550	555
His Glu Trp Ile	Asp Leu Ile Phe Gly	Tyr Lys Gln Arg Gly	Pro
	560	565	570
Ala Ala Glu Glu	Ala Leu Asn Val Phe	Tyr Tyr Cys Thr Tyr	Glu
	575	580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
				980					985					990
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg		
				995					1000					

<210> 34
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
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<210> 35
 <211> 1395
 <212> DNA
 <213> Homo sapiens

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<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

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Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
				20					25					30

Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45

Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60

Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75

Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90

Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105

Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120

Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 37

tcgtgtcccag gggctgatgt gc 22

<210> 38

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

gtctttaccc agccccggga tgcg 24

<210> 39

<211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaatacc aacgttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

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gctctgtgtg cgtgcaagat ccttcaggcc ttgttcacgt gtgaccacgt 200
gcaatatacg ctggttccag tttctgggtg gcaagaactt gaaactgcag 250
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cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900
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agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtgggtctt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaaagaagc agctgcgagc caccacgacg 1350
 accattgccca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
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 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245	250	255
Asn Glu Asp Glu Glu Asn Thr Leu Ser Val Asp Cys Thr Arg Ile		
260	265	270
Ser Phe Glu Tyr Asp Leu Arg Leu Val Leu Tyr Gln His Trp Ser		
275	280	285
Leu His Asp Ser Leu Cys Asn Thr Ser Tyr Thr Ala Ala Arg Phe		
290	295	300
Lys Leu Trp Ser Val His Gly Gln Lys Arg Leu Gln Glu Phe Leu		
305	310	315
Ala Asp Met Gly Leu Pro Leu Lys Gln Val Lys Gln Lys Phe Gln		
320	325	330
Ala Met Asp Ile Ser Leu Lys Glu Asn Leu Arg Glu Met Ile Glu		
335	340	345
Glu Ser Ala Asn Lys Phe Gly Met Lys Asp Met Arg Val Gln Thr		
350	355	360
Phe Ser Ile His Phe Gly Phe Lys His Lys Phe Leu Ala Ser Asp		
365	370	375
Val Val Phe Ala Thr Met Ser Leu Met Glu Ser Pro Glu Lys Asp		
380	385	390
Gly Ser Gly Thr Asp His Phe Ile Gln Ala Leu Asp Ser Leu Ser		
395	400	405
Arg Ser Asn Leu Asp Lys Leu Tyr His Gly Leu Glu Leu Ala Lys		
410	415	420
Lys Gln Leu Arg Ala Thr Gln Gln Thr Ile Ala Ser Cys Leu Cys		
425	430	435
Thr Asn Leu Val Ile Ser Gln Gly Pro Phe Leu Tyr Cys Ser Leu		
440	445	450
Met Glu Gly Thr Pro Asp Val Met Leu Phe Ser Arg Pro Ala Ser		
455	460	465
Leu Ser Leu Leu Ser Lys His Leu Leu Lys Ser Phe Val Cys Ser		
470	475	480
Thr Lys Asn Arg Arg Cys Lys Leu Leu Pro Leu Val Met Ala Ala		
485	490	495
Pro Leu Ser Met Glu His Gly Thr Val Thr Val Val Gly Ile Pro		
500	505	510
Pro Glu Thr Asp Ser Ser Asp Arg Lys Asn Phe Phe Gly Arg Ala		
515	520	525
Phe Glu Lys Ala Ala Glu Ser Thr Ser Ser Arg Met Leu His Asn		
530	535	540
His Phe Asp Leu Ser Val Ile Glu Leu Lys Ala Glu Asp Arg Ser		
545	550	555
Lys Phe Leu Asp Ala Leu Ile Ser Leu Leu Ser		

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
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 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttgttc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatata aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
 tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200
 gagtcaagaa accccccctt cttagactat ttacagcttt taacaattga 250
 gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgctctg 300
 ggagcgctc ctgctctttc tctgatgtg tgagatcctg atgggtggagc 350
 tcaccttga cagagctgtg gccagcggct gccaacggtg ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
 cccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
 agggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
 agggaggggc cccaaggga gacctgccct cagggcagca agggtgacaa 600
 gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
 tctcagtggg ccgcaagacg gccctgcaca gcggcgagga cttccagacg 700
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 cccctcgagg gctcagttg cactgctgtg aagcaggaag gccagggagg 1150
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taaagaatgc tgtctoctct tggaaaaaaa aaaaaaaaa 3089

<210> 47
<211> 259
<212> PRT
<213> Homo sapiens

<220>
<221> Signal Peptide
<222> 1-20
<223> Signal Peptide

<220>
<221> N-glycosylation Site
<222> 72-75
<223> N-glycosylation Site

<220>
<221> Clq Domain Proteins
<222> 144-178, 78-111, 84-117
<223> Clq Domain Proteins

<400> 47
Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu
1 5 10 15
Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp
20 25 30
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35 40 45
Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
50 55 60
Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
65 70 75
Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
80 85 90
Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
95 100 105
Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
110 115 120
Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
125 130 135
His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
140 145 150
Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
155 160 165
Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
170 175 180
Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
185 190 195
Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

	200		205		210
Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val					
	215		220		225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser					
	230		235		240
Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys					
	245		250		255
Ala Glu Asp Asp					

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccaggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
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 caggaaagac tgaggccgcg gcctgccccg cccggctccc tgcgccgcc 100
 ccgcctcccg ggacagaaga tgtgtccag ggtccctctg ctgtgccgc 150
 tgctcctgct actggccctg gggcctgggg tgcagggtg cccatccgc 200
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 aaaagatgaa gtgtgaaa 2768

<210> 52

<211> 673

<212> PRT

<213> Homo sapiens

<400> 52

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Ala	Leu	Gly	Pro	Gly	Val	Gln	Gly	Cys	Pro	Ser	Gly	Cys	Gln	Cys	20	25	30	
Ser	Gln	Pro	Gln	Thr	Val	Phe	Cys	Thr	Ala	Arg	Gln	Gly	Thr	Thr	35	40	45	
Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe	50	55	60	
Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Gly	Ser	Phe	Ala	Gly	Leu	65	70	75	
Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser	80	85	90	
Leu	Pro	Ser	Gly	Val	Phe	Gln	Pro	Leu	Ala	Asn	Leu	Ser	Asn	Leu				

	95	100	105
Asp Leu Thr Ala	Asn Arg Leu His Glu	Ile Thr Asn Glu Thr	Phe
	110	115	120
Arg Gly Leu Arg	Arg Leu Glu Arg Leu	Tyr Leu Gly Lys Asn	Arg
	125	130	135
Ile Arg His Ile	Gln Pro Gly Ala Phe	Asp Thr Leu Asp Arg	Leu
	140	145	150
Leu Glu Leu Lys	Leu Gln Asp Asn Glu	Leu Arg Ala Leu Pro	Pro
	155	160	165
Leu Arg Leu Pro	Arg Leu Leu Leu Leu	Asp Leu Ser His Asn	Ser
	170	175	180
Leu Leu Ala Leu	Glu Pro Gly Ile Leu	Asp Thr Ala Asn Val	Glu
	185	190	195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu	Gln Gln Leu Asp Glu	Gly
	200	205	210
Leu Phe Ser Arg	Leu Arg Asn Leu His	Asp Leu Asp Val Ser	Asp
	215	220	225
Asn Gln Leu Glu	Arg Val Pro Pro Val	Ile Arg Gly Leu Arg	Gly
	230	235	240
Leu Thr Arg Leu	Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln	Leu
	245	250	255
Arg Pro Glu Asp	Leu Ala Gly Leu Ala	Ala Leu Gln Glu Leu	Asp
	260	265	270
Val Ser Asn Leu	Ser Leu Gln Ala Leu	Pro Gly Asp Leu Ser	Gly
	275	280	285
Leu Phe Pro Arg	Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro	Phe
	290	295	300
Asn Cys Val Cys	Pro Leu Ser Trp Phe	Gly Pro Trp Val Arg	Glu
	305	310	315
Ser His Val Thr	Leu Ala Ser Pro Glu	Glu Thr Arg Cys His	Phe
	320	325	330
Pro Pro Lys Asn	Ala Gly Arg Leu Leu	Leu Glu Leu Asp Tyr	Ala
	335	340	345
Asp Phe Gly Cys	Pro Ala Thr Thr Thr	Thr Ala Thr Val Pro	Thr
	350	355	360
Thr Arg Pro Val	Val Arg Glu Pro Thr	Ala Leu Ser Ser Ser	Leu
	365	370	375
Ala Pro Thr Trp	Leu Ser Pro Thr Ala	Pro Ala Thr Glu Ala	Pro
	380	385	390
Ser Pro Pro Ser	Thr Ala Pro Pro Thr	Val Gly Pro Val Pro	Gln
	395	400	405
Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr	Cys

410	415	420
His Leu Gly Thr Arg	His His Leu Ala Cys	Leu Cys Pro Glu Gly
425	430	435
Phe Thr Gly Leu Tyr	Cys Glu Ser Gln Met	Gly Gln Gly Thr Arg
440	445	450
Pro Ser Pro Thr Pro	Val Thr Pro Arg Pro	Pro Arg Ser Leu Thr
455	460	465
Leu Gly Ile Glu Pro	Val Ser Pro Thr Ser	Leu Arg Val Gly Leu
470	475	480
Gln Arg Tyr Leu Gln	Gly Ser Ser Val Gln	Leu Arg Ser Leu Arg
485	490	495
Leu Thr Tyr Arg Asn	Leu Ser Gly Pro Asp	Lys Arg Leu Val Thr
500	505	510
Leu Arg Leu Pro Ala	Ser Leu Ala Glu Tyr	Thr Val Thr Gln Leu
515	520	525
Arg Pro Asn Ala Thr	Tyr Ser Val Cys Val	Met Pro Leu Gly Pro
530	535	540
Gly Arg Val Pro Glu	Gly Glu Glu Ala Cys	Gly Glu Ala His Thr
545	550	555
Pro Pro Ala Val His	Ser Asn His Ala Pro	Val Thr Gln Ala Arg
560	565	570
Glu Gly Asn Leu Pro	Leu Leu Ile Ala Pro	Ala Leu Ala Ala Val
575	580	585
Leu Leu Ala Ala Leu	Ala Ala Val Gly Ala	Ala Tyr Cys Val Arg
590	595	600
Arg Gly Arg Ala Met	Ala Ala Ala Ala Gln	Asp Lys Gly Gln Val
605	610	615
Gly Pro Gly Ala Gly	Pro Leu Glu Leu Glu	Gly Val Lys Val Pro
620	625	630
Leu Glu Pro Gly Pro	Lys Ala Thr Glu Gly	Gly Gly Glu Ala Leu
635	640	645
Pro Ser Gly Ser Glu	Cys Glu Val Pro Leu	Met Gly Phe Pro Gly
650	655	660
Pro Gly Leu Gln Ser	Pro Leu His Ala Lys	Pro Tyr Ile
665	670	

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
tggatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 56
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ttttgagctc atottoatca ttcatatgag gaaataagtg gtaaaatcct 100
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ttatgacagc agagggtgat gctccagagc tgccagaaga aagggaactg 200
atgaccaact gctccaacat gtctctaaga aaggttcccg cagacttgac 250
cccagccaca acgacaactgg atttatacta taacctcctt tttcaactcc 300
agagttcaga ttttcattct gtctccaaac tgagagtttt gattctatgc 350
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 35 40 45
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
 50 55 60
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
 65 70 75
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
 80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
				95					100					105	
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
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Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	
				380					385					390	
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	
				395					400					405	

Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp	Pro
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Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser	Asp
425		430	435
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp	Leu
440		445	450
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His	Leu
455		460	465
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr	Asp
470		475	480
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn	Ile
485		490	495
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln	Ser
500		505	510
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe	Arg
515		520	525
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr	Ser
530		535	540
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu	Tyr
545		550	555
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu	His
560		565	570
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val	Val
575		580	585
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu	His
590		595	600
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr	Gln
605		610	615
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys	Arg
620		625	630
Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp	Ser
635		640	645
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu	Asp
650		655	660
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro	Gly
665		670	675
Lys Ser Ile Ser	Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser	Tyr
680		685	690
Lys Ser Ile Phe	Val Leu Ser Pro Asn	Phe Val Gln Asn Glu	Trp
695		700	705
Cys His Tyr Glu	Phe Tyr Phe Ala His	His Asn Leu Phe His	Glu
710		715	720

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe	
				725						730				735	
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu	
				740					745					750	
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly	
				755					760					765	
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu	
				770					775					780	
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn	
				785					790					795	
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys	
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<210> 59
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
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<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

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 <211> 756
 <212> PRT
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<400> 62
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 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
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 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

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Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg		Phe	Thr	Gly	Val	Ile	Thr				
				200						205					210				
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser		Asp	Trp	Val	Thr	Ser	Tyr				
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Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His		Thr	Trp	Val	Thr	Val	Lys				
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Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu		Gly	Asn	Ser	Glu	Lys	Glu				
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Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val		Pro	Met	Val	Ala	Arg	Tyr				
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Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe		Asp	Asn	Gly	Ser	Ile	Cys				
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Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro		Leu	Pro	Asp	Pro	Asn	Asn				
				290						295					300				
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr		Thr	Thr	Asp	Asp	Leu	Asp				
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Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met		Arg	Gln	Leu	Met	Lys	Val				
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Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr		Arg	Ile	Tyr	Asn	Ile	Gly				
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Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr		Ala	Val	Glu	Ile	Ser	Asp				
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				365						370					375				
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu		Gly	Arg	Glu	Leu	Leu	Leu				
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Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu		Tyr	Leu	Ala	Arg	Asn	Ala				
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Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr		Arg	Ile	His	Val	Leu	Pro				
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Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys		Ala	Tyr	Glu	Gly	Gly	Ser				
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Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg		Trp	Thr	His	Asp	Gly	Ile				
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Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu		Asn	Thr	Leu	Leu	Trp	Glu				
				455						460					465				
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg		Lys	Val	Pro	Asn	His	Tyr				
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Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser		Glu	Asn	Ala	Thr	Val	Ala				
				485						490					495				
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp		Met	Glu	Lys	Ile	Pro	Phe				

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Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr					
				515					520					525					
Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr					
				530					535					540					
Pro	Thr	Pro	Asp	Asp	His	Val	Phe	Arg	Trp	Leu	Ala	Tyr	Ser	Tyr					
				545					550					555					
Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys					
				560					565					570					
His	Thr	Glu	Asp	Phe	Gln	Lys	Glu	Glu	Gly	Thr	Val	Asn	Gly	Ala					
				575					580					585					
Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu					
				590					595					600					
His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys					
				605					610					615					
Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg					
				620					625					630					
Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys					
				635					640					645					
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile					
				650					655					660					
Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp					
				665					670					675					
Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr					
				680					685					690					
Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val					
				695					700					705					
Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys					
				710					715					720					
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys					
				725					730					735					
Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg					
				740					745					750					
Lys	Arg	Arg	Gln	Arg	Gly														
				755															

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctaccogt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaaactcg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
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tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100
cccagccccg gcttcagctc tttcccaggt gttgactoca gctccagctt 150
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gagggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtgtct tgtttccctg ccagacacca cctttcccgt 300
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350
ttgagaaaag actttctaaa gtgaggggaat atgtccaatt aattagtgtg 400
tatgaaaaag aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacactg aactggactt cgagctgata aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
agctcagaaa ttgttgacca gctggaggtg gagataagaa atatgactct 600
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aaagatcaaa acaccctgt cgtccacctt cctcccactc cagggagctg 750
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
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ccccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950
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 gaatatggcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100
 ctctccctaa tgctgcctat aataaccgct tttcatatgc taatgttgct 1150
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 ccacacttca ggtgctaacc acttggtata ccaagcagta taaaccatct 1300
 gcttctaacg ctttcatggt atgtgggggt ctgtatgcc aacacaggga 1350
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacaggga 1400
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500
 ttaccttctg aattatgac tttctgtctt gcagaagccc cagtaagctg 1550
 tttaggagtt agggtgaaag agaaaatggt tgttgaaaaa atagtcttct 1600
 ccacttactt agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650
 gcaatgttta ggtgcatagt tctaccacac tagagatcta ggacatttgt 1700
 cttgatttgg tgagttctct tggaatcat ctgcctcttc aggcgcattt 1750
 tgcaataaag tctgtctagg gtgggattgt cagaggtcta ggggcactgt 1800
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 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatctgg 2000
 agctcctcga gggaccaaact ctccaacttt ttttccct cactagcacc 2050
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 attctacatc tgtaaagtgc tgagttttat ggagagaggc ctttttatgc 2150
 attaaattgt acatggcaaa taaatcccag aaggatctgt agataggcca 2200
 cctgcttttt cttttctctc attgtccacc ttactaaaag tcagtagaat 2250
 cttctaccto ataacttctc tccaaaggca gctcagaaga ttagaaccag 2300
 acttactaac caattccacc ccccaaccaac ccccttctac tgctactttt 2350
 aaaaaaatta atagttttct atggaactga tctaagatta gaaaaattaa 2400
 ttttctttaa tttcattatg gacttttatt tacatgactc taagactata 2450
 agaaaaatctg atggcagtga caaagtgcta gcatttattg ttatctaata 2500

aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcattg 2550
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caagtcttag tctataggat tggcagtta aatgctttac tccccctttt 2800
aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
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Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro
20 25 30
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu	215	220	225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	230	235	240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	245	250	255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	260	265	270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	275	280	285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	290	295	300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	305	310	315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	320	325	330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	335	340	345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	350	355	360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	365	370	375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	380	385	390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	395	400	405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	410	415	420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	425	430	435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	440	445	450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	455	460	465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	470	475	480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	485	490	495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln	500	505	510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggtttt 150
cttatctata tggtgcttgg ggtagggatt actctcccca gcattccaaac 200
aaaggngatgt attggngngc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga ttgctattg tatataaatg 300
ctcgagagtt gcggtacacc tatggccaag gtagtgttac agcagtttac 350
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

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tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150
ccgtgtttgc tatgcogatg ctgtcctagt ggaaacaact ccactgtaac 200
tagattgac tatgcacttt tcttgcttgt tggagtatgt gtactttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacatttttg ttggctataa 350
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctct 400
ctttactaat gatcaaagtg aagagtagca gtgatcctag agctgcagtg 450
cacaatggat tttggttctt taaatttgct gcagcaattg caattattat 500
tggggcattc ttcattccag aaggaaactt tacaactgtg tggttttatg 550
taggcattgg aggtgccttt tgtttcatcc tcatacaact agtcttactt 600
attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
agggaactcg agatgttggt atgcagcctt gttatcagct acagctctga 700
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catccagcca gttgttcaga aaacaaggcg ttcacagtg tcaacatgct 800
cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
cacaaccaag atctggtttg ttacagtctt cagtaattac agtctacaca 900
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 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcatt 2650
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<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

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Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro	
				20					25					30	
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe	
				35					40					45	
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly	
				50					55					60	
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu	
				65					70					75	
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val	
				80					85					90	
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser	
				95					100					105	
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala	
				110					115					120	
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala	
				125					130					135	
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr	
				140					145					150	
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu	
				155					160					165	
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu	
				170					175					180	
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr	
				185					190					195	
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu	
				200					205					210	
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser	
				215					220					225	
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys	
				230					235					240	
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser	
				245					250					255	
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr	
				260					265					270	
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr	
				275					280					285	

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr
				290					295					300
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala
				305					310					315
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr
				320					325					330
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr
				335					340					345
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg
				350					355					360
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val
				365					370					375
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His
				380					385					390
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr
				395					400					405
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp
				410					415					420
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val
				425					430					435
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg
				440					445					450

Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
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 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtoc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgtgtgtccc 300
 ttgtaacatt ttggttggtc ataaagctgt atatcgtttg tgctttggtt 350
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgacacaat ggattttggt tctttaaat 450
tgtctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgtctgccta gtggaacaaa ntccactgta attagattga tnatgcact 150
tttnttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaggt 250
gttgctccctt gtaacatttt ggttggctat aaagctgtat atngtttttg 300
ctttggttg gctangttct atnttcttct ctctttacta atgatcaaag 350
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgetcttgt gaacgtnttg 50
gagatgggga gcgtccttgg ggttgtgtct catggcgagc tggataccat 100
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgctg tcctagtggg 150
aacaactcca ctgtaactag attgatctat gcacttttct tgettggttg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aagtggttgt cccttgtaac 300
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtgcac aatggatttt ggttctttaa atttgctgca 450
gcaattgcaa ttattatttg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtggt gtcccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc ttgggtttgg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtgggtttat gtaggcatgg 400
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcattccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgcc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtggg aacaactcca ctgtaactag attgatctat 50

gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
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cgcgaggcctt tcggcaaagg cagtcgagtg tttgcagacc ggggcgagtc 150
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
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gcacacaagg ctctggctcg cttccctccc tcgtttccag ctctggggcg 450
aatcccacat ctgttttaac tctccgccga gggcgagcag gagcgagagt 500
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gacgcaactt gagactccc catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg 650
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tttacatgta atcaacatgg gaacttttag gggaacotaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
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 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr		575	580	585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr		590	595	600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu		605	610	615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His		620	625	630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu		635	640	645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys		650	655	660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu		665	670	675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln		680	685	690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys		695	700	705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys		710	715	720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp		725	730	735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr		740	745	750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu		755	760	765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu		770	775	780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val		785	790	795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu		800	805	810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg		815	820	825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg		830	835	840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser		845	850	855
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly					860	865	

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 <212> DNA

<213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 85
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 <210> 86
 <211> 18
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 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 86
 ggccagctat ctccgcag 18
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 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 87
 aagggcctgc aagagaag 18
 <210> 88
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 <212> DNA
 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 88
 cactgggaca actgtggg 18
 <210> 89
 <211> 18
 <212> DNA
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 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
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 <223> Synthetic oligonucleotide probe
 <400> 90
 aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctggcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcggcgggtg aatcggtttc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

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atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
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 acagcccgtc ttgtgacagt gactcccagt gagcccaga aatgacaagc 750
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 ctctcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtcccttttg tttggagaag gcagtgtgag gctgcacagt 900
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 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

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 20 25
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg 45
 35 40
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro 60
 50 55
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His 75
 65 70
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His 90
 80 85
 His His Pro Arg His Thr Pro His His Leu His His His His His 105
 95 100
 Pro His Arg His His Pro Arg His Ala Arg 115
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<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
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 gctgacgctg ctggcctttg cgggttactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggcctacaag 200
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 cagcatctct cccaagctcc gctccatcgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgttctcct tcccggcacc cagccatgtg gtgacagcca 450
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 aaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	
				80					85					90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	
				95					100					105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	
				110					115					120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	
				125					130					135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	
				140					145					150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	
				155					160					165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	
				170					175					180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	
				185					190					195	
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
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<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
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 ctgaggctgg gctcgaaacc gaaagtccg tccggaccct ccaagtggag 200
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cacgcttcac atacactaca cggaagctt ggtagatgga cgtattattg 300
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 caccatctgt ccagcggtat gcagtgggtgc agtatgacgt ggagctgatt 500
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 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650
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<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

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Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu	35	40	45	
Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu	50	55	60	
His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp	65	70	75	
Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys	80	85	90	
Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val	95	100	105	
Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly	110	115	120	
Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln	125	130	135	
Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu	140	145	150	
Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val	155	160	165	
Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala	170	175	180	
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185

190

195

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

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cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgcggggt 150
gaggctgggc tcgaaaccga aagtcccgtc cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgccga gcccgctgct tttggagaca 250
cgcttcacat acactacacg ggaagcttgg tagatggacg tattattgac 300
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gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggaat cattccttct cacttggcct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 500
actaatccga gcccaactact ggctaagct ggtgaagggc attttgcctc 550
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggatcacc 600
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gagaaacgaa acaagagcaa aaagaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
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gaaccatgtg ccgagccgcg tgcttttggg gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300
atgcagtggg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctcttgggcc tcattgggta tcacctatac agaaaggcca 450
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 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
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 ccactgcacg acgggggtgg actgacctga aaaaaatgtc tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtgatta 250
 tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatcgaat ggacaagtcc gaggtgatag ttacagttaa ggttgtctgg 400
 gtcaaacagg tgctcgcatc tggcttttcg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattctt tttggagggt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcactctttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600
 tggcagttaa cacatctgat ttcccacagc acaacagccc tgcattgggt 650
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 aacttatctc tgagtgtagt ctacgttaa agttgtgtaa tactaaaatc 750
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 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaatttac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata tctgaggtcc aaaaccacaa 950
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 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
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 tgtcccttcc atgggaaggt cttccgctgt gcctctcatt ccaagggcag 1250
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<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
			20						25					30
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
				35					40					45
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
				50					55					60
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
				65					70					75
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
				80					85					90
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
				95					100					105
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
				110					115					120
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
				125					130					135
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
				140					145					150
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
				155										

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tggatttcta gagggttga gatgctcaga atgcattgac tggggggaaa 150
agcgcaatac tattgcttcc attgtgctg gtgtactatt ttttacaggc 200
tgggtggatta tcatagatgc agctgttatt tatccacca tgaaagattt 250
caaccactca taccatgcct gtggtgttat agcaaccata gcttctctaa 300
tgattaatgc agtatogaat ggacaagtcc gaggtgatag ttacagttaa 350
ggttgtctgg gtcaaacagg tgctgcatt tggcttttcg ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattctt tttggaggtt 450
atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
cagaatgcct tcactctttt tggagggctg gtttttaagt ttggc 545

<210> 105
<211> 490
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 39, 108, 145, 179, 219, 412, 479
<223> unknown base

<400> 105
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agaatgcatt actgggggaa aagcgcaaat actattgctt ccattgctgc 100
tgggtgtaaa ttttttacag gctggtggat tatcatagat gcagntgtta 150
tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
atagcaacca tagccttctt aatgattaat gcagtatoga atggacaagt 250
ccgagtgat agttacagtg aaggtgtgtt gggtcaaaca ggtgctcgca 300
tttggtttt cggtggtttt atgttggcct ttggatctct gattgcattc 350
atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
ccctggaatt gntgtatttt tcagaatgc cttcatcttt tttggagggc 450
tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
<211> 466
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 26, 38, 81, 115, 207, 329, 380, 446, 449
<223> unknown base

<400> 106
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aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100
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acagggtggt ggattatcat agatgcagct gttatttata ccaccatgaa 200
agatttnaac cactcatacc atgcctgttg tgttatagca accatagcct 250
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agtgaagggt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
tttcatgttg gcctttggat ttctgattgn attctatgcg gattctcttt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450
atthttccag aatgcc 466

<210> 107
<211> 377
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356
<223> unknown base

<400> 107
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tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200
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tttgatctn tgattgcatt tatgtggatt ntttttgag gttatgttg 350
taaagnaaaa gacatagtat accctgt 377

<210> 108
<211> 552
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 12, 25, 65, 130, 437, 537
<223> unknown base

<400> 108
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ggactgacct gaaaaaatg tttggatttn tagagggcctt gagatgctca 150
gaatgcattg actgggggga aaagcgcaat actattgctt ccatgtctgc 200
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tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300
atagcaacca tagccttcct aatgattaat gcagtatcga atggacaagt 350
ccgagggtgat agttacagt aaggttgtct gggctaaaaca ggtgctcgca 400
tttggtttt cgttggttgc atgttggtct ttgatntct gattgcatct 450
atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 500
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tg 552

<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
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<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
tgtgtgctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
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<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
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 cagttatgtc tttggtatca gacatacgaa aggtctcttt ttagttcgtg 2950
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 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	
				110					115					120	
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	
				125					130					135	
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	
				140					145					150	
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	
				155					160					165	
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	
				170					175					180	
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	
				185					190					195	
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	
				200					205					210	
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	
				215					220					225	
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	
				230					235					240	
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	
				245					250					255	
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	
				260					265					270	
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	
				275					280					285	
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	
				290					295					300	
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	
				305					310					315	
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	
				320					325					330	
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	
				335					340					345	
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	
				350					355					360	
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	
				365					370					375	
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	
				380					385					390	
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	
				395					400					405	
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	
				410					415					420	

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His Ile
425		430 435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr Trp
440		445 450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile Pro
455		460 465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys Gly
470		475 480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val Glu
485		490 495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu Gly
500		505 510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln Phe
515		520 525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His Asp
530		535 540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala Gln
545		550 555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe Thr
560		565 570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser Ser
575		580 585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu Asp
590		595 600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys Asn	
605		610

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
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 gatagggtcg acgctgctgc tgtgtgctgg gctgctgagc ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgtcgtt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaaggagg gaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc tttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
tacaacctat gactacaaaag cagatgaaaa gtggggcttt tgtgaaactg 600
aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
caaaactggaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaag 700
agaagcatat cggtatctcc aaaaggcagc aagcatgaac cataccaaaag 750
ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800
aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
tccaaggga cagactgctc ttggctttct gtatgcctct ggacttggtg 900
ttaattcaag tcaggcaaaag gctcttgat attatacatt tggagctctt 950
gggggcaatc taatagccca catggttttg gtaagtagac tttagtggaa 1000
ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050
tttttcagct ttcgatgac agatttgctt gtattaagac caaatattca 1100
gttgaacttc cttcaaattc ttgttaatgg atataacaca tggaatctac 1150
atgtaaatga aagttggtgg agtcacaaat ttttctttaa aatgattagt 1200
ttggctgatt gccccataaa agagagatct gataaatggc tctttttaa 1250
ttttctctga gttggaattg tcagaatcat tttttacatt agattatcat 1300
aattttaaaa atttttcttt agtttttcaa aattttgtaa atggtggcta 1350
tagaaaaaca acatgaaata ttatacaata ttttgcaaca atgccctaag 1400
aattgttaaa attcatggag ttatttgtgc agaatgactc cagagagctc 1450
tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
gtcatttatt gctagtgaca ctgtgcctgc ttccagtagt ctcattttcc 1550
ctattttgct aatttgttac tttttcttgg ctaatttggga agattaactc 1600
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
a 1701

<210> 115
<211> 301
<212> PRT
<213> Homo sapiens

<400> 115
Met Arg Val Arg Ile Gly Leu Thr Leu Leu Cys Ala Val Leu
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Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp
20 25 30

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

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 acgctcagcc ccagcacgt caccatcagg gactacggtg tgcctcggtg 250
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 aaggatgagg ccacacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggctacggc ttagtccct 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500
 ctgaccttgg gtccccttta aactttctct gagccttgct tcccctctgt 550
 aaaatgggtt aataatatcc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
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 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

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 ccccgccgcc cgcccgctga gcccccgcc gaggtccgga caggccgaga 150
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 cgctgtgtct ttcagccatg ctgatgacca caccctgtcc aggccagaca 3300
 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
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 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu
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 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn
				245					250					255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val
				260					265					270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu
				275					280					285
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly
				290					295					300
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro
				305					310					315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln
				320					325					330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly
				335					340					345
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys
				350					355					360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu
				365					370					375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile
				380					385					390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro
				395					400					405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro
				410					415					420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu
				425					430					435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His
				440					445					450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val
				455					460					465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr
				470					475					480
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys
				485					490					495
Val	His	Gln	His	Ile	His	Tyr	Gln	Cys						
				500										

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

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<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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gcctgggtgt tctccttctt ggtcctggaa gtcacatctg tgttggggag 200

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<210> 124

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

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Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys	35	40	45	
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe	50	55	60	
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp	65	70	75	
Ala	Ile	Arg	Phe	Thr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu	80	85	90	
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr	95	100	105	
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu	110	115	120	
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val	125	130	135	
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg	140	145	150	
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys	155	160	165	
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu	170	175	180	
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys	185	190	195	
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly	200	205	210	

Gln Val Asn Ala Asp Cys Asp Ala Cys Met Cys Gln Asp Phe Met	215	220	225
Leu His Gly Ala Val Ser Leu Pro Gly Gly Ala Pro Ala Ser Gly	230	235	240
Ala Ala Ile Tyr Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln	245	250	255
Thr Asp Ser Asp Gly Arg Phe Arg Ile Pro Gly Leu Cys Pro Asp	260	265	270
Gly Lys Ser Ile Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile	275	280	285
Val Leu Thr Met Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys	290	295	300
Ala Glu Phe Val Arg Ala Glu Thr Pro Tyr Met Val Met Asn Pro	305	310	315
Glu Thr Lys Ala Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys	320	325	330
Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His	335	340	345
Asn Asp Thr Leu Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys	350	355	360
Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe	365	370	375
Cys Lys Ala Gln Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala	380	385	390
Gln Leu Ile Val Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val	395	400	405
Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn	410	415	420
Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys	425	430	435
Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala	440	445	450
Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile	455	460	465
Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys	470	475	480
Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg	485	490	495
Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val	500	505	510
Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr	515	520	525

Phe Thr Leu His Val	Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg Leu	Gln Lys Phe Val	Asn Thr Thr Lys Val Leu	545	550	555
Pro Phe Asn Lys Lys	Gly Ser Ala Val	Phe His Glu Ile Lys Met	560	565	570
Leu Arg Arg Lys Glu	Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn	575	580	585
Ile Ile Pro Leu Gly	Glu Val Val Gly	Glu Asp Pro Met Ala Glu	590	595	600
Leu Glu Ile Pro Ser	Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro	605	610	615
Tyr Ile Gly Lys Val	Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg	620	625	630
Asn Ile Ser Thr Ala	Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile	635	640	645
Asn Asp Glu Gly Asp	Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe	650	655	660
Ser Val Asp Phe Arg	Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala	665	670	675
Gly Lys Val Lys Val	His Leu Asp Ser	Thr Gln Val Lys Met Pro	680	685	690
Glu His Ile Ser Thr	Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr	695	700	705
Gly Leu Trp Glu Glu	Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg	710	715	720
Arg Asn Lys Arg Glu	Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu	725	730	735
Ile Arg Glu Arg Arg	Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg	740	745	750
Arg Cys Phe Val Lys	Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu	755	760	765
Pro Ser Glu Gln Ile	Gln Gly Val Val	Ile Ser Val Ile Asn Leu	770	775	780
Glu Pro Arg Thr Gly	Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg	785	790	795
Phe Asp Ser Val Ile	Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala	800	805	810
Phe Cys Asp Asp Gln	Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu	815	820	825
Ala Ser Leu Ala Gly	Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro	830	835	840

Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn		845	850	855
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys		860	865	870
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser		875	880	885
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg		890	895	900
Ala	Cys	Glu	Glu	Ala	Pro	Pro	Ser	Ala	Ala	His	Phe	Arg	Phe	Tyr		905	910	915
Gln	Ile	Glu	Gly	Asp	Arg	Tyr	Asp	Tyr	Asn	Thr	Val	Pro	Phe	Asn		920	925	930
Glu	Asp	Asp	Pro	Met	Ser	Trp	Thr	Glu	Asp	Tyr	Leu	Ala	Trp	Trp		935	940	945
Pro	Lys	Pro	Met	Glu	Phe	Arg	Ala	Cys	Tyr	Ile	Lys	Val	Lys	Ile		950	955	960
Val	Gly	Pro	Leu	Glu	Val	Asn	Val	Arg	Ser	Arg	Asn	Met	Gly	Gly		965	970	975
Thr	His	Arg	Arg	Thr	Val	Gly	Lys	Leu	Tyr	Gly	Ile	Arg	Asp	Val		980	985	990
Arg	Ser	Thr	Arg	Asp	Arg	Asp	Gln	Pro	Asn	Val	Ser	Ala	Ala	Cys		995	1000	1005
Leu	Glu	Phe	Lys	Cys	Ser	Gly	Met	Leu	Tyr	Asp	Gln	Asp	Arg	Val		1010	1015	1020
Asp	Arg	Thr	Leu	Val	Lys	Val	Ile	Pro	Gln	Gly	Ser	Cys	Arg	Arg		1025	1030	1035
Ala	Ser	Val	Asn	Pro	Met	Leu	His	Glu	Tyr	Leu	Val	Asn	His	Leu		1040	1045	1050
Pro	Leu	Ala	Val	Asn	Asn	Asp	Thr	Ser	Glu	Tyr	Thr	Met	Leu	Ala		1055	1060	1065
Pro	Leu	Asp	Pro	Leu	Gly	His	Asn	Tyr	Gly	Ile	Tyr	Thr	Val	Thr		1070	1075	1080
Asp	Gln	Asp	Pro	Arg	Thr	Ala	Lys	Glu	Ile	Ala	Leu	Gly	Arg	Cys		1085	1090	1095
Phe	Asp	Gly	Thr	Ser	Asp	Gly	Ser	Ser	Arg	Ile	Met	Lys	Ser	Asn		1100	1105	1110
Val	Gly	Val	Ala	Leu	Thr	Phe	Asn	Cys	Val	Glu	Arg	Gln	Val	Gly		1115	1120	1125
Arg	Gln	Ser	Ala	Phe	Gln	Tyr	Leu	Gln	Ser	Thr	Pro	Ala	Gln	Ser		1130	1135	1140
Pro	Ala	Ala	Gly	Thr	Val	Gln	Gly	Arg	Val	Pro	Ser	Arg	Arg	Gln		1145	1150	1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

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<210> 126

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ccattgtgca ggtcaggta cag 23

<210> 127

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

ctggagcaag tgctcagctg cctgtgggtca gactggggtc 40

<210> 128

<211> 2819

<212> DNA

<213> Homo sapiens

<400> 128

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ctacctacco gtacgcatac atacatatgt gtatatatat gtaaactaga 200

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<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

Met	Tyr	Leu	Ser	Arg	Ser	Leu	Ser	Ile	His	Ala	Leu	Trp	Val	Thr
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Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
			20						25					30

Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Gly	Lys	Val	Trp	
			35						40					45

Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
				50					55					60

Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
				65					70					75

Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn
				80					85					90

Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
				95					100					105

Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
				110					115					120

Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr
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Leu Ser Trp Ser Lys Thr Ile Glu Leu Thr Asp Asn Ile Val Ile		
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Thr Phe Glu Ser Gly Arg Pro Asp Gln Met Ile Leu Glu Lys Ser		
155	160	165
Leu Asp Tyr Gly Arg Thr Trp Gln Pro Tyr Gln Tyr Tyr Ala Thr		
170	175	180
Asp Cys Leu Asp Ala Phe His Met Asp Pro Lys Ser Val Lys Asp		
185	190	195
Leu Ser Gln His Thr Val Leu Glu Ile Ile Cys Thr Glu Glu Tyr		
200	205	210
Ser Thr Gly Tyr Thr Thr Asn Ser Lys Ile Ile His Phe Glu Ile		
215	220	225
Lys Asp Arg Phe Ala Leu Phe Ala Gly Pro Arg Leu Arg Asn Met		
230	235	240
Ala Ser Leu Tyr Gly Gln Leu Asp Thr Thr Lys Lys Leu Arg Asp		
245	250	255
Phe Phe Thr Val Thr Asp Leu Arg Ile Arg Leu Leu Arg Pro Ala		
260	265	270
Val Gly Glu Ile Phe Val Asp Glu Leu His Leu Ala Arg Tyr Phe		
275	280	285
Tyr Ala Ile Ser Asp Ile Lys Val Arg Gly Arg Cys Lys Cys Asn		
290	295	300
Leu His Ala Thr Val Cys Val Tyr Asp Asn Ser Lys Leu Thr Cys		
305	310	315
Glu Cys Glu His Asn Thr Thr Gly Pro Asp Cys Gly Lys Cys Lys		
320	325	330
Lys Asn Tyr Gln Gly Arg Pro Trp Ser Pro Gly Ser Tyr Leu Pro		
335	340	345
Ile Pro Lys Gly Thr Ala Asn Thr Cys Ile Pro Ser Ile Ser Ser		
350	355	360
Ile Gly Thr Asn Val Cys Asp Asn Glu Leu Leu His Cys Gln Asn		
365	370	375
Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala		
380	385	390
Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly		
395	400	405
Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr		
410	415	420
Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro		
425	430	435
Leu Val Phe		

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgctggac ctcggtacg gaattggctt ccctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgtc cgggtgacct gggccgagcc ctcccgtcg gctaagattg 50
ctgaggaggc ggcgggtagc tggcaggcgc cgacttcga aggcgcgcgt 100
ccgggcgagg tgtcctcatg acttctcttg tggaccatgt ccgtgatctt 150
ttttgcctgc gtggtagcgg taagggatgg actgccctc tcagcctcta 200
ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
agtttagcct tgcgactggc ccagtatcca ggtcgaggtt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggacgtg gcoctgoatgg 350
 ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400
 accctgtggt gggaaattcac agcttcctat gacactacct gcattggcct 450
 agcctccagg ccatacgttt ttcttgagtt tgacagcadc attcagaaaag 500
 tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagccttg 550
 gaaaaaattc aggaggagct caagttgcag cotccagcgg ttctcactct 600
 ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650
 acttgagacc tgcctcctaatt ttccgaatgg aaccagtgc agccctgggt 700
 atcctctccc tcattctcaa catcatgtgt gctgcctga atctcattcg 750
 aggagttcac ctgacagaac attctttaca ggatccaagg agctggttct 800
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
 gagctctgat tctccatcc gggagcagtg atgtcaaaact tctgctgctg 900
 gggaaatctc atcagcaggg agcctgtgga aaagggcagtc tcagtgaat 950
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
 gctgttgccc acaagcgcct tttatttagg gtaaaattaa caaatccatt 1050
 ctattcctct gaccatgct tagtacatat gacotttaac ccttacattt 1100
 atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
 gatttgatcc cccaggattc tattttgttt aatgggcttt tctactaaaa 1200
 gcataaaata ctgaggctga tttagtcagg gcaaaacat ttactttaca 1250
 tattcgtttt caatacttgc tgttcatggt acacaagctt cttacggttt 1300
 tcttgaaca ataaatatatt tgagtaaata atgggtacat tttacaaaac 1350
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

Met	Ser	Val	Ile	Phe	Phe	Ala	Cys	Val	Val	Arg	Val	Arg	Asp	Gly
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Leu	Pro	Leu	Ser	Ala	Ser	Thr	Asp	Phe	Tyr	His	Thr	Gln	Asp	Phe
				20					25					30
Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35					40					45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
				215					220					225	
Gln	Thr	Ser													

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctgag agaccctgtg gtgggaattc acagcttcnt atgacactac 50
 ctgcattggc nttagcctcca ggccatacgc ttttcttgag tttagacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagtgc cntncagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggtttcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg ctctectgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgagggcggt ggtgcctgcc cctttaaggc cgggcgctcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaaag cccctaggct ggtctgggt gcttggcggc ggcggcttcc 250
tccccgctcg tctccccgg gccagaggc acctcggtt cagtcatgct 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tcgcagaaca 350
gctattccac gagaggatcc gcgagtgtat tatacaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgaccgctt caagaagcct 450
gctgagttca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccotggcaat tgccctgggt gctgtcctgc 550
tctgcccctt ctccatcatc agcaatgagg tgctgtctc cctgctcgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctgaa 650
cctgtttttt ctcttcccca acctgtccct catcttctc atgcccttg 700
catatttctt cactgagtct gagggtttg ctggctccag aaaggtgtc 750
ctgggcggg tctatgagac agtgggtgatg ttgatgtcc tcactctgt 800
ggtgtaggt atggtgtggg tggcatcagc cattgtggac aagaacaag 850
ccaacagaga gtcaactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tgggttctg ctgctcctg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggtgctt ggaagacctg gaggagcagc tgtactgtc agcctttgag 1050
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ctgggtcctt ttggtgcgt cattcaggt gtactcatct ttacctaat 1400
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 gctcactcgc tttagacctc tgggtgactt tggacgcttc aactggctgg 1600
 gcaattttcta catttgtgtc ctctacaacg cagcctttgc aggccctacc 1650
 acactctgtc tgggtgaagac cttcactgca gctgtgcggg cagagctgat 1700
 ccgggccttt gggctggaca gactgccgct gccgtctctc ggtttccccc 1750
 aggcacttag gaagaccag caccagtgc ctccagctgg gggcgggaag 1800
 gaaaaaactg gacactgcca tctgtgcct aggctggag ggaagcccaa 1850
 ggctacttgg acctcaggac ctggaatctg agagggtggg tggcagaggg 1900
 gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
 ggacctctg cttttccata ctttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150
 tcgggagata gattgtctcc cttgcctctg gccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
1				5					10				15	

Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
			20						25				30	

Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
			35						40				45	

Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
			50						55				60	

Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
			65						70				75	

Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
			80						85				90	

Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
			95						100				105	

Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
			110						115				120	

Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	125		130		135
Glu Ser Glu Gly	Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly	Arg		
	140	145	150		
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu	Val		
	155	160	165		
Leu Gly Met Val	Trp Val Ala Ser Ala	Ile Val Asp Lys Asn	Lys		
	170	175	180		
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu	Pro		
	185	190	195		
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu	Leu		
	200	205	210		
Val Cys Thr Pro	Leu Gly Leu Ala Arg	Met Phe Ser Val Thr	Gly		
	215	220	225		
Lys Leu Leu Val	Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu	Gln		
	230	235	240		
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg	Ile		
	245	250	255		
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu	Leu		
	260	265	270		
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu	Glu		
	275	280	285		
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr	Pro		
	290	295	300		
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val	Leu		
	305	310	315		
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala	Ala		
	320	325	330		
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser	Phe		
	335	340	345		
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu	Ile		
	350	355	360		
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser	Pro		
	365	370	375		
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met	Thr		
	380	385	390		
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser	Ala		
	395	400	405		
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp	Leu		
	410	415	420		
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr	Ile		
	425	430	435		
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu	Cys		

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val	Arg Ala Glu Leu Ile Arg	
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu	Pro Val Ser Gly Phe Pro	
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgccgag ggaaggcccc ttgggttggt cttggttgct tggcggcggc 50
 ggnnttcntcc ccgctcgtcc tccccgggcc cagaggcacc tcggttcag 100
 tcattgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attccacgag aggatccgcg agtgtattat atcaaacactt 200
 ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250
 gaagcctgct gaggttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcggtggt gcctgccctt taagggcggg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggtctgcgag gaaaggcccc 150
 taggctgggt ctggtgcttg gcggcggcgg cttcctcccc gttgtcntcc 200
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tcogtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatata aacacttctg tttgcaacac tgtacatcnt 350
 ctgccacata ttctgaacc gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttaccotgg caattgccct ggggtgctgc ctgctcctgc cctttccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

gactgtatct gagccccaga ctgc 24

<210> 142

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 142

tcagcaatga ggtgctgctc 20

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 143

tgaggaagat gagggacagg ttgg 24

<210> 144

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 144

tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145

<211> 685

<212> DNA

<213> Homo sapiens

<400> 145

gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50

caaacctgtt ttggaattga ggaaacttct cttttgatct cagccottgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggtcct 150

gtcagtggaac agtttgaag gacaccagg ccattatct tctccagcc 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaaaaa aatggtacca tcggtacctt 300
 gggaaaagaaa tactaagaga aaccccagac aatattccttg aggttcagga 350
 atctggagag tacagatgcc aggcccaggg ctcccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtgtttctg aggtgccggg caaaggcgga agtaaacactg 600
 aataatacta ttacaagaa tgataatgto ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
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 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
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 cccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcggcgcgc gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaacccat ggctccgcag aacctgagca ccttttgctt gttgctgcta 200
 tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250
 ggtgcctcga agtgccctcta taaaggatat taaaaaggcc tataggaaac 300
 tagccctgca gottcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtg 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500
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 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggtcct 650
 ggcaaacgga agtgcaattg tcggcaagag atcgggacca cccagctggg 700
 ccttgggcgc ttccaaatga cccaggaggt ggtctgcgac gaatgcccta 750
 atgtcaaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtaccctttt attggagaag gtgagcctca 850
 cgtggatggg gagcctggag atttacggtt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcaactgt tggtcttgag atggatatta ctcaacttga 1000
 tggtcacaag gtacatatatt ccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
 aagggtctct tgataatcac ttttgatgtg gattttocaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgt atttattatc tgcaaggttt 1300
 ttttggtgtt gttttgttt ttattttcaa tatgcaagtt aggccttaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtt aagaatttgt 1400
 ccatttgcat tcggaaga atgaccagca aaaggtttac taatacctct 1450
 ccctttgggg atttaatgtc tgggtgctgc gcctgagttt caagaattaa 1500
 agotgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
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Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
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 gntgcgaccg aagcggcggg cggaggaggt tttaggatt ttggaacag 100
 gaccgggaca gaggaacat ggttccgcag aacntgagca cnttttgcct 150
 gttgntgnta tacttcacgc gggcgggtgat tgcgggacga gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaggcc 250
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
 acaagcccag gagaatttc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
 ggcacgaggc ggcggggcag tcgcgggatg cggccgggag ccacagcctg 50
 aggcctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtccagg cctcttgaa gcattggagac tgtgtgtatt 200
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
 ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagccatt gtggacctca ttggtgcat ggagaccag 350
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
aagcttgttg ccatgacaat gggctctggg gccaatga agacttcoag 550
cagtgtcagc gacatcattg tgggtggcaa gcggatcagc ccaggggtg 600
atgatgttgt gaagtogatg taccctccgt tggacccaa actcctggag 650
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgcctggtgac 700
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
tgtcggctgc tgaggagcat ttggaagtc ttcgagaagc agccctagct 800
tctgagccag ataaaggcct ccagggcct gaaggcttc tgcaggagca 850
gtctgcaatt tagtgacctac aggcagcag ctagccatga aggccctgc 900
cgccatccct ggatggctca gcttagcctt ctacttttct ctatagagtt 950
agttgttctc cacgctgga gattcagct gtgtgtgcat agtaaagcag 1000
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
gagtggcagt ctaatactac agttaggga gatgccattc actctctgca 1100
agaggagtat tgaaaaactgg tggactgtca gctttattta gctcacctag 1150
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
tgtattatct gcctggctcc tgaggcgtct gggctctctc tctcccttgc 1400
aggtttgggt ttgaagctga ggaactacaa agttgatgat tcttttttta 1450
tctttatgcc tgcaatttta ctagctacc actaggtgga tagtaaattt 1500
atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met	Glu	Thr	Val	Val	Ile	Val	Ala	Ile	Gly	Val	Leu	Ala	Thr	Ile
1				5					10					15

Phe	Leu	Ala	Ser	Phe	Ala	Ala	Leu	Val	Leu	Val	Cys	Arg	Gln	Arg
			20						25					30

Tyr	Cys	Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu	Asp Asp Val Val Ile Thr Asn Pro His Ile Glu		
	65	70	75
Ala Ile Leu Glu	Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu		
	80	85	90
Met Ser His Cys	Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr		
	95	100	105
Glu Lys Leu Val	Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys		
	110	115	120
Thr Ser Ala Ser	Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile		
	125	130	135
Ser Pro Arg Val	Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu		
	140	145	150
Asp Pro Lys Leu	Leu Asp Ala Arg Thr Thr Ala Leu Leu Ser		
	155	160	165
Val Ser His Leu	Val Leu Val Thr Arg Asn Ala Cys His Leu Thr		
	170	175	180
Gly Gly Leu Asp	Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu		
	185	190	195
His Leu Glu Val	Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp		
	200	205	210
Lys Gly Leu Pro	Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala		
	215	220	225
Ile			

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 tcgccgctgt cccaccact gcagccatga tctccttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgtttcttgg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg cttggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtgc cttattgggtt ggcctttgat aggcattgac ttcgaaattt 350
 atggattttt tctcttgttc aggggcttct ttctgtcgt tgttggcttt 400
 attagaagag tgccagtctt tggatccctc ctaaatctac ctggaattag 450
 atcatttgta gataaagttg gagaaagcaa caatatggta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattttca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaaact gagagaggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgtgt ttttcacaa tgtgcgaaac tcagccatcc 800
 ttgagaaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tattttccagt tgcaactgtat ctctggaagt gatgcatgaa ttogattgga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000
 ggattaacttt tttttngcn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.

<220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
 1 5 10 15
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
 20 25 30
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
			80						85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
			95						100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
			110						115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
			125						130					135

Asn Met Val

<210> 154
 <211> 405
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 66
 <223> unknown base

<400> 154
 gaagacgtgg cggctctcgc ctgggctggt tcccggcttc atttctcccg 50
 actcagcttc ccacntggg ctttccgagg tgctttcgcc gctgtcccca 100
 ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150
 ttaaccggat ttggagtgtt tttctgttc tttggaatga ttctcttttt 200
 tgacaaagca ctactggcta ttggaatgt tttatttga gccggcttgg 250
 cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300
 aaaatgaaag ctacaggttt ttttctgggt ggtgtatttg tagtccctat 350
 tggttggcct ttgataggca tgatcttoga aatttatgga ttttttctct 400
 tgttc 405

<210> 155
 <211> 1781
 <212> DNA
 <213> Homo sapiens

<400> 155
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 ccatgtgcc aaggctgcc ggaaggagac gccttcctga gtcttggatc 100
 tttcttctt ctggaatct ttgactgtgg gtatgtattt atttctgaat 150
 aagagcgtcc acgcatcatg gacctcgcgg gactgctgaa gtctcagttc 200
 ctgtgccacc tggcttctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctottca ctctcctcct ctggcccatt aacaagcagc 300
 tottccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgtctg tggagtgggt gtcgggcacg gaatgcacca tcttcacgga 400
 cccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtgggtctca 450
 accacaagtt tgaattgac tttctgtgtg gctggagcct gtcogaacgc 500
 tttgggtgtg tagggggctc caaggtcctg gccaaagaaag agotggccta 550
 tgtccaatt atcggctgga tgtgttactt caccgagatg gtcttctgtt 600
 cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650
 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcagggt gcccgggcca 750
 aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800
 gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaatcc aacactgctg ggagtccata 900
 acggaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950
 gacatccctg aagacgatga cgagtgtctg gcctggctgc acaagctcta 1000
 ccaggagaag gatgcctttc aggaggagta ctacaggacg ggcaccttc 1050
 cagagacgcc catggtgccc ccccgcggcg cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgctggt gctctacctt ttcttcagct tcctggtcag 1150
 catgatcagg agcgggtctt cctgacgct ggccagcttc atcctcgtct 1200
 tctttgtgct ctcgtggga gttcgatgga tgattggtgt gacggaaatt 1250
 gacaagggct ctgcctacgg caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaacctggg gaactggtg 1350
 cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgctgggc acggcgggaag tcacgacctc tccagccagg gagtctggtc 1450
 tcaaggccg atggggagga agatgttttg taatctttt ttccccatgt 1500
 gctttagtgg gctttggtt tctttttgtg cgagtgtgtg tgagaatggc 1550
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 gctgcagggg agggcagggc tggggaccga aggggacaag ttcccccttc 1650
 atcccttggt gctgagtttt ctgtaaccct tggttgccag agataaagt 1700
 aaaagtgtt taggtgagat gactaaatta tgcctccaag aaaaaaaaaa 1750
 taaagtgtt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu	1	5	10	15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	35	40	45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	50	55	60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	65	70	75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	80	85	90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	95	100	105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	110	115	120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	125	130	135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	140	145	150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	155	160	165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	170	175	180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	185	190	195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	200	205	210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	215	220	225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	230	235	240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	245	250	255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	260	265	270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	275	280	285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val				

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala		
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile		
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe		
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu		
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys		
365	370	375
Leu Asn Asp		

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgagcgcg gcgtagcatgg aggggggagag tacgtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaagggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaatg tcaaaaagaa 300
 tgtggtaggt tggtaacaaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400
 gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500
 acagggtacc tttagtgggt gccaatctgg gcattgtctga acaactgggt 550
 tataaaactg tatcagggtc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgtttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtggaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcgac aagagagaag aacatccaaa aagacctca ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaattctg aattttctca 900
 ttcatgtgtt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

actacaacca coactctcgat gtagtagaca atctgacott aatggtagaa 1000
 cacactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcgg 1100
 tgttagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
 caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
 aaagatgaag ggttttggtg aatatcaccg gtctoctaca ttttgatcct 1250
 tttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
 atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350
 tttactatgt tcacctgttt gcagtaatac acagataaact cttagtgcac 1400
 ttacttcaca aagtactttt tcaaaccatca gatgctttta tttccaaacc 1450
 tttttttcac ctttactaa gttgttgagg ggaaggctta cacagacaca 1500
 ttcttttagaa ttggaaaagt gagaccaggc acagtggctc acacctgtaa 1550
 tcccgacact tagggaagac aagtcaggag gattgattga agctaggagt 1600
 tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
 atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700
 tgaaaattta tctgagtcac taaaattctc ctttaagtga acttttttag 1750
 aagtacatta tggcctagatg tgccagataa aatgctggat atcatgcaat 1800
 aaatttgcaa aacatcatct aaaatttaaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158
 <211> 409
 <212> PRT
 <213> Homo sapiens

<400> 158
 Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu
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 Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu
 20 25 30
 Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile
 35 40 45
 Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
 50 55 60
 Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn
 65 70 75
 Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
 80 85 90
 Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
 95 100 105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	
				395					400					405	
Ser	Pro	Thr	Phe												

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 cgcgccccac accctctgcg gtccccgcgg cgcctgccac ccttccctcc 150
 tccccgcgt ccccgctcg cgggcagtc agcttgccgg gtctgctgcc 200
 ccgcgaaacc ccgaggtcac cagcccgcg cttctgttcc ctgggccggc 250
 cgcgccctcc acgcccctct tctcccctgg ccggcgccct ggcaccgggg 300
 accgttgctt gacgcgaggc ccagctctac ttttcgcccc gcgtctcctc 350
 cgctgtctcg cctcttccac caactccaac tccttctccc tccagctcca 400
 ctcgctagtc ccgactccg ccagccctcg gcccgctgcc gtacgcgccg 450
 tccccgtccg gtcccaaagg tgggaacgcg tccgcccgcc ccgcacccat 500
 ggcacgggtc ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550
 ccgcgctgct ggctgcccag ctcaagtcga aaagttgctc ggaagtcgca 600
 cgtctttacg tgtccaaagg cttcaacaag aacgatgccc ccttccacga 650
 gatcaacggg gatcatttga agatctgtcc ccagggttct acctgctgct 700
 ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750
 agtgtgtgtc gcgaacagtg caatcatttg caagctgtct ttgtcttcag 800
 ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850
 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
 aattctgagc tatttaaaga tctcttcgta gaggtgaaac gttactacgt 950
 ggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000
 tcttgagcgg gatgttccgc ctggtgaact ccagtagcca ctttacagat 1050
 gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
 agatgtccct cgcaaatgga agctccaggt tactcgtgct tttgtagcag 1150
 ccgctacttt cgctcaaggc ttagcggttg cgggagatgt cgtgagcaag 1200
 gtctccgtgg taaacccac agccagtggt acccatgccc tgttgaagat 1250
 gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgtttaca 1300
 actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
 gctagagggt cctttcaaca ttgaatcggg catggatccc atcgatgtga 1450

agatttctga tgctattatg aacatgcagc ataatagtgt tcaagtgtct 1500
 cagaaggttt tccagggatg tggaccccc aagcccctcc cagctggacg 1550
 aatttctogt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcaccccg ggaacgcccc accacagcag ctggcactag tttggaccga 1650
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 ctcccttcg agcaacgttt gcaacgatga gaggatggct gcaggaacg 1750
 gcaatgagga tgactgttgg aatgggaaag gcaaaagcag gtacctgttt 1800
 gcagtgcag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttcagtgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgcctat gagaaagcgg acagtgtctg tgtccgtcct 2100
 ggggcacag cctacctcct cactgtcttc tgcacttgt tcctggttat 2150
 gcagagagag tggagataat tctcaaacct tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 tttagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttggctc ctgctcccc aaaccatgtt aaactgtgct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgtatg tttttttctc atttctgttg tgggtttttt 2500
 tttccaaactg tgatctcgcc ttgtttctta caagcaaac agggtccttt 2550
 cttggcacgt aacatgtacg tattttctgaa atattaaata gctgtacaga 2600
 agcaggtttt atttatcatg ttatcttatt aaaagaaaa gcccaaaaag 2650
 c 2651

<210> 160
 <211> 556
 <212> PRT
 <213> Homo sapiens

<400> 160
 Met Ala Arg Phe Gly Leu Pro Ala Leu Leu Cys Thr Leu Ala Val
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 Leu Ser Ala Ala Leu Leu Ala Ala Glu Leu Lys Ser Lys Ser Cys
 20 25 30
 Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys					
				50					55					60					
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70					75					
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85					90					
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100					105					
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115					120					
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130					135					
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145					150					
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160					165					
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175					180					
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190					195					
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205					210					
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220					225					
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235					240					
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250					255					
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265					270					
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280					285					
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295					300					
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310					315					
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325					330					
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340					345					
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

350					355					360				
Phe	Ser	Ala	Arg	Phe	Arg	Pro	His	His	Pro	Glu	Glu	Arg	Pro	Thr
				365					370					375
Thr	Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Val	Lys
				380					385					390
Glu	Lys	Leu	Lys	Gln	Ala	Lys	Lys	Phe	Trp	Ser	Ser	Leu	Pro	Ser
				395					400					405
Asn	Val	Cys	Asn	Asp	Glu	Arg	Met	Ala	Ala	Gly	Asn	Gly	Asn	Glu
				410					415					420
Asp	Asp	Cys	Trp	Asn	Gly	Lys	Gly	Lys	Ser	Arg	Tyr	Leu	Phe	Ala
				425					430					435
Val	Thr	Gly	Asn	Gly	Leu	Ala	Asn	Gln	Gly	Asn	Asn	Pro	Glu	Val
				440					445					450
Gln	Val	Asp	Thr	Ser	Lys	Pro	Asp	Ile	Leu	Ile	Leu	Arg	Gln	Ile
				455					460					465
Met	Ala	Leu	Arg	Val	Met	Thr	Ser	Lys	Met	Lys	Asn	Ala	Tyr	Asn
				470					475					480
Gly	Asn	Asp	Val	Asp	Phe	Phe	Asp	Ile	Ser	Asp	Glu	Ser	Ser	Gly
				485					490					495
Glu	Gly	Ser	Gly	Ser	Gly	Cys	Glu	Tyr	Gln	Gln	Cys	Pro	Ser	Glu
				500					505					510
Phe	Asp	Tyr	Asn	Ala	Thr	Asp	His	Ala	Gly	Lys	Ser	Ala	Asn	Glu
				515					520					525
Lys	Ala	Asp	Ser	Ala	Gly	Val	Arg	Pro	Gly	Ala	Gln	Ala	Tyr	Leu
				530					535					540
Leu	Thr	Val	Phe	Cys	Ile	Leu	Phe	Leu	Val	Met	Gln	Arg	Glu	Trp
				545					550					555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctccgtgga aacccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccagcag 100
ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150
cgatgaaagt tctaattctt tccctectcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcga agattggttc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggg tgccaaagaa gcagtgcgcc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaaacaaat gtcagctaag aagctttgtct 500
ctgcctttgt aggagctctg agcgcccact cttccaatta aacatttctca 550
gccaaagaag cagtgagcac acctaccaga cactcttctt ctcccacctc 600
actctcccac tgtaccaccc cctaaatcat tccagtgtc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
cgtcagtcct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800
aaatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met

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Leu Met Ser Met	Val Ser Ser Ser Leu	Asn Pro Gly Val Ala	Arg
	20	25	30
Gly His Arg Asp	Arg Gly Gln Ala Ser	Arg Arg Trp Leu Gln	Glu
	35	40	45
Gly Gly Gln Glu	Cys Glu Cys Lys Asp	Trp Phe Leu Arg Ala	Pro
	50	55	60
Arg Arg Lys Phe	Met Thr Val Ser Gly	Leu Pro Lys Lys Gln	Cys
	65	70	75
Pro Cys Asp His	Phe Lys Gly Asn Val	Lys Lys Thr Arg His	Gln
	80	85	90
Arg His His Arg	Lys Pro Asn Lys His	Ser Arg Ala Cys Gln	Gln
	95	100	105
Phe Leu Lys Gln	Cys Gln Leu Arg Ser	Phe Ala Leu Pro Leu	
	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gctgacagt tgtcctggga ctgcttgtct 50
 tattcctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atccctcgct 200
 ccatgtccag gagcacagga ttatggaat ttgatgataa tgaagaaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcttgacaaa 300
 tccaagagca gccaaatcct gcttttcag tttggctcca caagtcctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys	Asp Pro Lys Pro Asp	Phe		
	35	40	45		
Pro Lys Phe Leu	Ser Leu Leu Gly Thr	Glu Ile Ile Glu Asn	Ala		
	50	55	60		
Val Glu Phe Ile	Leu Arg Ser Met Ser	Arg Ser Thr Gly Phe	Met		
	65	70	75		
Glu Phe Asp Asp	Asn Glu Gly Lys His	Ser Ser Lys			
	80	85			

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgccagc gctgcagag gctgagcagg gaaaaagcca gtgcccagc 50
 ggaagcacag ctccagagctg gtctgccatg gacatcctgg tccactcct 100
 gcagctgctg gtgtgtcttc ttacctgccc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggacactcca atatgagcgg tttgtggttg 450
 ctctctggaga ggacatgaga cagctggctg atggctccat ggatgtgtg 500
 gtctgcactc tgggtgtgtg ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgtctctt ttctgggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
 gagcccacct ggaacacat tggggatggc tgtgcctca ccagagagac 700
 ctggaaggat ctgagaacg cccagttctc cgaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggcccacat catgggaaag 800
 gctgtcaaac aatctttccc aagctccaag gcaactatct gctccttccc 850
 cagcctccaa ttagaacaag ccaccacca gcctatctat ctccactga 900
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgccttc 1000
 gacagtgaag aagctctact tctacgtga ccaggggagg aaacactagg 1050
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

gctcccaat gttgtccctt tccttggttc ccatggtaaa gctcctctcg 1150
cttctcctct gaggtacac ccatgcgtct ctaggaaactg gtcacaaaag 1200
tcatggtgcc tgcattccctg ccaagccccc ctgacctctt ctccccacta 1250
ccaccttctt cctgagctgg gggcaccagc gagaatcaga gatgctgggg 1300
atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
taataaatag acgaaaccac g 1371

<210> 169
<211> 277
<212> PRT
<213> Homo sapiens

<400> 169
Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
1 5 10 15
Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
20 25 30
Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
35 40 45
Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
50 55 60
Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
65 70 75
Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro
80 85 90
Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys
95 100 105
Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu
110 115 120
Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp
125 130 135
Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val
140 145 150
Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg
155 160 165
Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr
170 175 180
Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp
185 190 195
Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys
200 205 210
Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln
215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270

Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
 gtgggattta tttagtgca agatcgtttt cttagtggtg gtggaagttg 50
 cctcatcgca ggcagatgtt ggggctttgt ccgaacagct ccctctgcc 100
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctcttcttac tgggttttga ccataacttc cttagcttga gcagtttggt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca aactcgctc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
 tcctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaactttt 550
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaattc tggttcccag cgcaaaagaag 650
 gccatataca tggatgatga tgtaatttg caaggatgata ttcttgccct 700
 ttacaatata gcaactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtc 800
 aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850
 catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
 aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtgatcat 1000
 cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050
 atcctatgtg gaatgtccgc caccttggtt ccagtgtgtg aaaacgatat 1100
 tcacctcagt ttgtaaaagg tgccaagtta ctccattgga atggacattt 1150

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<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

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			20						25				30	

Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro
			35						40				45	

Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp
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Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp
			65						70				75	

Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn
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Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr
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Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser
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Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly
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Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu
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Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys
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Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile
			170						175				180	

Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala
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	185		190		195
Phe Ser Glu Asp	Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg			
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Gly Ala Gly Asn	Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys			
	215		220		225
Lys Glu Arg Ile	Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser			
	230		235		240
Phe Asn Pro Gly	Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg			
	245		250		255
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val			
	260		265		270
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr			
	275		280		285
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp			
	290		295		300
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg			
	305		310		315
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn			
	320		325		330
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val			
	335		340		345
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu			
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<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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<211> 1866
<212> DNA
<213> Homo sapiens

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 <212> DNA
 <213> Homo sapiens

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<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

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Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
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His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
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Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
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<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggccat 250

gatgtttacc ttcagattca tcaccacct tctgggtcac attttcattt 300

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<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
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 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

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				110					115					120					
Leu	Leu	Phe	Gln	Pro	Leu	Trp	Thr	Phe	Ala	Ile	Leu	Ile	Phe	Phe					
				125					130					135					
Trp	Val	Leu	Trp	Val	Ala	Val	Leu	Leu	Ser	Leu	Gly	Thr	Ala	Gly					
				140					145					150					
Ala	Ala	Gln	Val	Met	Glu	Gly	Gly	Gln	Val	Glu	Tyr	Lys	Pro	Leu					
				155					160					165					
Ser	Gly	Ile	Arg	Tyr	Met	Trp	Ser	Tyr	His	Leu	Ile	Gly	Leu	Ile					
				170					175					180					
Trp	Thr	Ser	Glu	Phe	Ile	Leu	Ala	Cys	Gln	Gln	Met	Thr	Ile	Ala					
				185					190					195					
Gly	Ala	Val	Val	Thr	Cys	Tyr	Phe	Asn	Arg	Ser	Lys	Asn	Asp	Pro					
				200					205					210					
Pro	Asp	His	Pro	Ile	Leu	Ser	Ser	Leu	Ser	Ile	Leu	Phe	Phe	Tyr					
				215					220					225					
His	Gln	Gly	Thr	Val	Val	Lys	Gly	Ser	Phe	Leu	Ile	Ser	Val	Val					
				230					235					240					
Arg	Ile	Pro	Arg	Ile	Ile	Val	Met	Tyr	Met	Gln	Asn	Ala	Leu	Lys					
				245					250					255					
Glu	Gln	Gln	His	Gly	Ala	Leu	Ser	Arg	Tyr	Leu	Phe	Arg	Cys	Cys					
				260					265					270					
Tyr	Cys	Cys	Phe	Trp	Cys	Leu	Asp	Lys	Tyr	Leu	Leu	His	Leu	Asn					
				275					280					285					
Gln	Asn	Ala	Tyr	Thr	Thr	Thr	Ala	Ile	Asn	Gly	Thr	Asp	Phe	Cys					
				290					295					300					
Thr	Ser	Ala	Lys	Asp	Ala	Phe	Lys	Ile	Leu	Ser	Lys	Asn	Ser	Ser					
				305					310					315					
His	Phe	Thr	Ser	Ile	Asn	Cys	Phe	Gly	Asp	Phe	Ile	Ile	Phe	Leu					
				320					325					330					
Gly	Lys	Val	Leu	Val	Val	Cys	Phe	Thr	Val	Phe	Gly	Gly	Leu	Met					
				335					340					345					
Ala	Phe	Asn	Tyr	Asn	Arg	Ala	Phe	Gln	Val	Trp	Ala	Val	Pro	Leu					
				350					355					360					
Leu	Leu	Val	Ala	Phe	Phe	Ala	Tyr	Leu	Val	Ala	His	Ser	Phe	Leu					
				365					370					375					
Ser	Val	Phe	Glu	Thr	Val	Leu	Asp	Ala	Leu	Phe	Leu	Cys	Phe	Ala					
				380					385					390					
Val	Asp	Leu	Glu	Thr	Asn	Asp	Gly	Ser	Ser	Glu	Lys	Pro	Tyr	Phe					
				395					400					405					
Met	Asp	Gln	Glu	Phe	Leu	Ser	Phe	Val	Lys	Arg	Ser	Asn	Lys	Leu					

	410		415		420
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Glu Gly Thr Glu	Leu Gln Ala Ile Val Arg				
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<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
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<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

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			20					25						30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	
			35					40						45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	
			50					55						60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	
			65					70						75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	
			80					85						90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	
			95					100						105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	
			110					115						120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	
			125					130						135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	
			140					145						150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	
			155					160						165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	
			170					175						180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	
			185					190						195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	
			200					205						210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	
			215					220						225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	
			230					235						240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	
			245					250						255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	
			260					265						270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	
			275					280						285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly	

	290		295		300
Ser Thr Ser Ile	Gly Lys Arg Arg Phe	Arg Ile Gln Lys Gln	Leu		
	305		310		315
Leu Ala Asp Val	Ala Gln Ala Leu Asp	Ile Gly Pro Ala Gly	Pro		
	320		325		330
Leu Met Gly Val	Val Gln Tyr Gly Asp	Asn Pro Ala Thr His	Phe		
	335		340		345
Asn Leu Lys Thr	His Thr Asn Ser Arg	Asp Leu Lys Thr Ala	Ile		
	350		355		360
Glu Lys Ile Thr	Gln Arg Gly Gly Leu	Ser Asn Val Gly Arg	Ala		
	365		370		375
Ile Ser Phe Val	Thr Lys Asn Phe Phe	Ser Lys Ala Asn Gly	Asn		
	380		385		390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly	Trp		
	395		400		405
Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu	Ser		
	410		415		420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu	Asn		
	425		430		435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala	Val		
	440		445		450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp	Phe		
	455		460		465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys	Asp		
	470		475		480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala	Asp		
	485		490		495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly	Asn		
	500		505		510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu	Phe		
	515		520		525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr	Thr		
	530		535		540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser	Lys		
	545		550		555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser	Gly		
	560		565		570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln	Leu		
	575		580		585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu	Ile		
	590		595		600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met	Ala		

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675
Pro Arg Asn		

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
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 gcgctgctgc ctcagcacca tggcgcgcca ggtcccgacg gctccgcgcc 150
 agatcccgcc cactacagtt tttctctgac tataattgat gcactggaca 200
 ccttgctgat tttggggaat gtctcagaat tccaaagagt ggttgaagtg 250
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggtctg ggtggaagta gaggtggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctctcccag cctttcagac 450
 cccactggc atgccatag gaacagtga cttacttcat ggctgaacc 500
 caggagagac cctgtcacc tgtacggcag ggattgggac cttcattgtt 550
 gaatttgcca cctgagcag cctcactggt gaccggtgt tcgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccgttca gatatcgggc 650
 tggtcggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700
 gcaggcatcg gggctggcgt ggactcctac tttgagtact tggtgaaagg 750
 agccatcctg cttcaggata agaagctcat ggccatgttc ctgagatata 800
 acaaaagcat ccggaactac acccgcttcg atgactggta cctgtgggtt 850
 cagatgtaca aggggactgt gtccatgcca gtcttcagc ccttgagggc 900
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950
 ggaccttcc caactactac actgtatgga agcagtttgg ggggtccccg 1000

gaattctaca acattctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgcc 1100
 cgggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaagggtga gtgcggattt gcaacaatca aagatctcg 1200
 agaccacaag ctggacaacc gcatggagtc gttcttctcg gccgagactg 1250
 tgaataacct ctacctctg tttgacccaa ccaacttcat ccacaacaat 1300
 gggtcacact tcgacgcggt gatcaccccc tatggggagt gcatctggg 1350
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 cctgcactg ctgccagagg ctgaaggaag agcagtggga ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacg agcaggtcga aatttcagaa 1500
 aaacactgtt agttcggggc catgggaacc tcagcaagg ccaggaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcatctactg ggacaggttt tcctagactc ctcataacca ctggataatt 1700
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 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
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 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly	Val Asn Pro Gly Glu Thr			
	140	145		150	
Pro Val Thr Cys	Thr Ala Gly Ile Gly	Thr Phe Ile Val Glu Phe			
	155	160		165	
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175		180	
Ala Arg Val Ala	Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile			
	185	190		195	
Gly Leu Val Gly	Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val			
	200	205		210	
Ala Gln Asp Ala	Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe Glu			
	215	220		225	
Tyr Leu Val Lys	Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met			
	230	235		240	
Ala Met Phe Leu	Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg			
	245	250		255	
Phe Asp Asp Trp	Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val			
	260	265		270	
Ser Met Pro Val	Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu			
	275	280		285	
Gln Ser Leu Ile	Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu			
	290	295		300	
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe			
	305	310		315	
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr			
	320	325		330	
Pro Leu Arg Pro	Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg			
	335	340		345	
Ala Thr Gly Asp	Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val			
	350	355		360	
Glu Ser Ile Glu	Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr			
	365	370		375	
Ile Lys Asp Leu	Arg Asp His Lys Leu	Asp Asn Arg Met Glu Ser			
	380	385		390	
Phe Phe Leu Ala	Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp			
	395	400		405	
Pro Thr Asn Phe	Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val			
	410	415		420	
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile			
	425	430		435	
Phe Asn Thr Glu	Ala His Pro Ile Asp	Leu Ala Ala Leu His Cys			

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met	
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln Lys	
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro Gly	
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys	
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln Pro	
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp Ser	
530	535	540
Ser		

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
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 catctgggtt tgggcagaaa ggagggtgct tcggagcccg cccctttctga 100
 gottctggg cgggctctag aacaattcag gttcgtctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatattt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250
 tgcagacttt cacaatggtt ctagaagaaa tctggacaag tcttttcatg 300
 tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgcgcctg gagaaacagt gtactattct 450
 gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 ccccgagcgc tgggtgctcac tcaactgaagg tcttgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatatgaa 650
 ctcaaccatc cttacccgac ctgggatgga gatcaccaaa gatggcttcc 700
 acctggttat tgagctggag gaacctgggc ccagtttga gttccttctg 750
 gcctactgga ggagggagcc tggtgccgag gaacatgtca aaatggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttctgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca tccccctgg 950
 actggccctg tttgcotttg ttggcttcat gctgatcctt gtggtcgtgc 1000
 cactgttcgt ctggaataat ggccggctgc tccagtactc ctgttgcctc 1050
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 aatcagctgc agaaggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
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 cagggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagtgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgtt tctacaagtc tagaagcaac catcagaggc aggggtgttt 1350
 gtctaacaga acactgactg aggcctaggg gatgtgacct ctagactggg 1400
 ggctgccact tgtgtgtga gcaaccctg gaaaagtgc ttcattcctt 1450
 cggtcctaag ttttctcatc tgtaatggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccagc acttgcaagg ctagaggga actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtggctt gagagccac tttcccagaa 1700
 taatccttga gagaaaagga atcatgggag caatgggtgt gagttcactt 1750
 caagccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttt tttctgttg taaagtacag 2000
 aattcagcaa ataaaaaggc ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
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Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
			20						25					30

Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
			35						40					45

Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
			50						55					60

Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
			65						70					75

Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
			80						85					90

Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
			95						100					105

Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
			110						115					120

Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser
			125						130					135

Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe
			140						145					150

His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe
			155						160					165

Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val
			170						175					180

Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met
			185						190					195

Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys
			200						205					210

Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu
			215						220					225

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
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 tagacctcag ctccaacata tgcatcttga agaaagatgg ctgagatgac 150
 agaatgcttt attttgaaa gaaacaatgt tctagggtcaa actgagtcta 200
 ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250
 tcatgtggtt ttctacgca ttgattocat gtttgctoac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcattctctt atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctcaactact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550
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 agaaactcaa ccactcttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750
 gaaccocctt cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
agggttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggctgctcc tgtgggctgc ggctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
aactggggcc ccaccacttt aacgtgctcg ccttccctcg caaccagttt 300
ggccaacacag agcctgacag caacaaggag attgagagct ttgcccgccg 350
cacctacagt gtctcattcc ccattgtttg caagattgca gtcaccggta 400
ctgggtgccca tcttgcttcc aagtacctgg ccagacttc tgggaaggag 450
cccacctgga acttctgga gtaoctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtoagtgga ggaggtcaga cccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaatgggtg cttcaaaggg agagaccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg gaaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct ctgaccagt gaatcaccag cgcatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatato aagcaataat ctcccaccca 900
 aggcctctgt aactggggac caatgattac ctcatagggc tgttgtgagg 950
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 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaaggttta gttgtgtgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgcataaaaa 1200
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
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 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 190

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<210> 191

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 191

agtctgggcc aggtacttga aggc 24

<210> 192

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 192

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<210> 193

<211> 2187

<212> DNA

<213> Homo sapiens

<400> 193

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 ctggggggccc gggccgcctt ctctcgaggt tggcaggaag ccaggttgca 150
 ggggtgtccgc ttctctcagtt ccagagaggt ggatcgcatg gtctccacgc 200
 ccatcgggagg cctcagctac gttcagggtt gcacaaaaa gcatcttaac 250
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 acgagaggcc ttggtogtcc tccatgaaga cgtcaggttg acctttgcc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

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aaagagcttc tgttttcttt gaaaaaaaa aaaaaaa 2187

<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

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			20						25					30
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg
			35						40					45
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr
			50						55					60
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly
			65						70					75
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala
			80						85					90
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu
			95						100					105
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly
			110						115					120
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr
			125						130					135
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile
			140						145					150
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr
			155						160					165
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln
			170						175					180
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro
			185						190					195
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu
			200						205					210
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly
			215						220					225
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln
			230						235					240
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His

245										250					255				
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro					
				260					265					270					
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn					
				275					280					285					
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln					
				290					295					300					
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser					
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Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile					
				320					325					330					
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile					
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Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe					
				350					355					360					
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser					
				365					370					375					
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu					
				380					385					390					
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val					
				395					400					405					
Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His					
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Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg					
				425					430					435					
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				440					445					450					
Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly					
				455					460					465					
Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu					
				470					475					480					
Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala					
				485					490					495					
Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys					
				500					505					510					
Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu					
				515					520					525					
Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val					
				530					535					540					
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys					
				545					550					555					
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys					

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr	
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile	
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu	
605	610	615

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 <211> 642
 <212> DNA
 <213> Homo sapiens

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 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
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 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgcgtgggtc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggt attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
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 ccgaacaaga tgaagacagt gaagtgcgcg ccgggctgtg acgtctgcac 200
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 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac cgggcaggta 400
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 ctgagccggg aggcgtgcca gggtagatcg ccgccggtcg tgagctgcta 500
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 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgttcta gctttttgag gacagctcct gtatccttct catccttgtc 1300
 tctccgcttg tcctcttggt atgttaggac agagttagag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttcctact cactttctcc 1400
 tagccagcct ggactttgga gcgtggggtg ggtgggacaa tggctcccca 1450
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 ccaattcgcc ctatagttag tcgta 1575

<210> 197
 <211> 346
 <212> PRT
 <213> Homo sapiens

<400> 197
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 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
 20 25 30
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

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				50					55					60					
Cys	Thr	Glu	Ala	Val	Gly	Ala	Val	Glu	Thr	Ile	His	Gly	Gln	Phe					
				65					70					75					
Ser	Leu	Ala	Val	Arg	Gly	Cys	Gly	Ser	Gly	Leu	Pro	Gly	Lys	Asn					
				80					85					90					
Asp	Arg	Gly	Leu	Asp	Leu	His	Gly	Leu	Leu	Ala	Phe	Ile	Gln	Leu					
				95					100					105					
Gln	Gln	Cys	Ala	Gln	Asp	Arg	Cys	Asn	Ala	Lys	Leu	Asn	Leu	Thr					
				110					115					120					
Ser	Arg	Ala	Leu	Asp	Pro	Ala	Gly	Asn	Glu	Ser	Ala	Tyr	Pro	Pro					
				125					130					135					
Asn	Gly	Val	Glu	Cys	Tyr	Ser	Cys	Val	Gly	Leu	Ser	Arg	Glu	Ala					
				140					145					150					
Cys	Gln	Gly	Thr	Ser	Pro	Pro	Val	Val	Ser	Cys	Tyr	Asn	Ala	Ser					
				155					160					165					
Asp	His	Val	Tyr	Lys	Gly	Cys	Phe	Asp	Gly	Asn	Val	Thr	Leu	Thr					
				170					175					180					
Ala	Ala	Asn	Val	Thr	Val	Ser	Leu	Pro	Val	Arg	Gly	Cys	Val	Gln					
				185					190					195					
Asp	Glu	Phe	Cys	Thr	Arg	Asp	Gly	Val	Thr	Gly	Pro	Gly	Phe	Thr					
				200					205					210					
Leu	Ser	Gly	Ser	Cys	Cys	Gln	Gly	Ser	Arg	Cys	Asn	Ser	Asp	Leu					
				215					220					225					
Arg	Asn	Lys	Thr	Tyr	Phe	Ser	Pro	Arg	Ile	Pro	Pro	Leu	Val	Arg					
				230					235					240					
Leu	Pro	Pro	Pro	Glu	Pro	Thr	Thr	Val	Ala	Ser	Thr	Thr	Ser	Val					
				245					250					255					
Thr	Thr	Ser	Thr	Ser	Ala	Pro	Val	Arg	Pro	Thr	Ser	Thr	Thr	Lys					
				260					265					270					
Pro	Met	Pro	Ala	Pro	Thr	Ser	Gln	Thr	Pro	Arg	Gln	Gly	Val	Glu					
				275					280					285					
His	Glu	Ala	Ser	Arg	Asp	Glu	Glu	Pro	Arg	Leu	Thr	Gly	Gly	Ala					
				290					295					300					
Ala	Gly	His	Gln	Asp	Arg	Ser	Asn	Ser	Gly	Gln	Tyr	Pro	Ala	Lys					
				305					310					315					
Gly	Gly	Pro	Gln	Gln	Pro	His	Asn	Lys	Gly	Cys	Val	Ala	Pro	Thr					
				320					325					330					
Ala	Gly	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Ala	Ala	Gly	Val	Leu					
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Leu

<210> 198
<211> 1657
<212> DNA
<213> Homo sapiens

<400> 198
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tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200
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aacgagagtg ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550
ccgcgggaaa ccaaccaaac cgtgcgctgt gacccattgc tgttctctgt 1600
atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatccttt 1650
gtttcct 1657

<210> 199
<211> 120
<212> PRT
<213> Homo sapiens

<400> 199
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Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe
20 25 30
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
35 40 45
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
50 55 60
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Gly
65 70 75
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
80 85 90
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
95 100 105
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
110 115 120

<210> 200
<211> 415
<212> DNA
<213> Homo sapiens

<400> 200
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cctcctgggtg ctccactctg cccagggagc caccctgggt ggtcctgagg 100
aagaaagcac cattgagaat tatgcgtcac gaccgaggc ctttaacacc 150
ccgttcctga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
cctgaactgg cagccctctt ttgagtctat caaaaggaaa ctctcctttcc 250
tcaactggga tgcctttcct aagctgaaag gactgaggag cgcaactcct 300
gatgcccaat gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
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Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30
Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45
Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60
Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75
Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
80 85 90
Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

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cagcaggagt ctcccaggtt gttcttctcc agccagttcc aactcaggag 150
acagggtcca aggccatggg agatctctcc tgtggctttg ccggccactc 200
atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300
tcaacctca aatttttggt atactagatg gcttccattt acccaccact 350
attttaaggt ccttttattt ttaggttcaa ggttcatttg acttgagaaa 400
gtgcccttct gcagcttcat tgattttggt tatcttcaact attaatgtga 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550
aatttaaatg ttatttctaatt attagtacat tcagttgtga tgtaatatga 600
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atttgtagat aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
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<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
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 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgctca gaagaggatc taactccttt ccgaggaggc atotccagga 250
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgtcc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttggaagt gatcgggcgt ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctcagggttc taaatggatg 450
 gaggctgcca tcccagtctt ctccttcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttgga cattttggga agggggacct gctgtttggc 550
 caatttatcc tacaggtctt ggacggtggg acctcttcag agaagatctg 600
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 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
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tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttcgag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc caaaatgtt gaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct ctttgggca acagatctca 1250
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 tatctgctat caagccaaat acctggtttt ccttatcatg ctgcaccag 1350
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 agttcaactt ttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
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 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcaggttccc tttttgtgcc ttcatgcct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
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 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

95					100					105				
Ser	Arg	Cys	Ser	Gly	Val	Glu	His	Phe	Ile	Leu	Glu	Val	Ile	Gly
				110					115					120
Arg	Leu	Pro	Asp	Met	Glu	Met	Val	Ile	Asn	Val	Arg	Asp	Tyr	Pro
				125					130					135
Gln	Val	Pro	Lys	Trp	Met	Glu	Pro	Ala	Ile	Pro	Val	Phe	Ser	Phe
				140					145					150
Ser	Lys	Thr	Ser	Glu	Tyr	His	Asp	Ile	Met	Tyr	Pro	Ala	Trp	Thr
				155					160					165
Phe	Trp	Glu	Gly	Gly	Pro	Ala	Val	Trp	Pro	Ile	Tyr	Pro	Thr	Gly
				170					175					180
Leu	Gly	Arg	Trp	Asp	Leu	Phe	Arg	Glu	Asp	Leu	Val	Arg	Ser	Ala
				185					190					195
Ala	Gln	Trp	Pro	Trp	Lys	Lys	Lys	Asn	Ser	Thr	Ala	Tyr	Phe	Arg
				200					205					210
Gly	Ser	Arg	Thr	Ser	Pro	Glu	Arg	Asp	Pro	Leu	Ile	Leu	Leu	Ser
				215					220					225
Arg	Lys	Asn	Pro	Lys	Leu	Val	Asp	Ala	Glu	Tyr	Thr	Lys	Asn	Gln
				230					235					240
Ala	Trp	Lys	Ser	Met	Lys	Asp	Thr	Leu	Gly	Lys	Pro	Ala	Ala	Lys
				245					250					255
Asp	Val	His	Leu	Val	Asp	His	Cys	Lys	Tyr	Lys	Tyr	Leu	Phe	Asn
				260					265					270
Phe	Arg	Gly	Val	Ala	Ala	Ser	Phe	Arg	Phe	Lys	His	Leu	Phe	Leu
				275					280					285
Cys	Gly	Ser	Leu	Val	Phe	His	Val	Gly	Asp	Glu	Trp	Leu	Glu	Phe
				290					295					300
Phe	Tyr	Pro	Gln	Leu	Lys	Pro	Trp	Val	His	Tyr	Ile	Pro	Val	Lys
				305					310					315
Thr	Asp	Leu	Ser	Asn	Val	Gln	Glu	Leu	Leu	Gln	Phe	Val	Lys	Ala
				320					325					330
Asn	Asp	Asp	Val	Ala	Gln	Glu	Ile	Ala	Glu	Arg	Gly	Ser	Gln	Phe
				335					340					345
Ile	Arg	Asn	His	Leu	Gln	Met	Asp	Asp	Ile	Thr	Cys	Tyr	Trp	Glu
				350					355					360
Asn	Leu	Leu	Ser	Glu	Tyr	Ser	Lys	Phe	Leu	Ser	Tyr	Asn	Val	Thr
				365					370					375
Arg	Arg	Lys	Gly	Tyr	Asp	Gln	Ile	Ile	Pro	Lys	Met	Leu	Lys	Thr
				380					385					390

Glu Leu

<210> 206

<211> 1425
<212> DNA
<213> Homo sapiens

<400> 206
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tttacctccc ttcgccact tcttgaggg atcccgaggt ctggtggtcc 150
ggatgcccgc cagggatggc tggctgcct gcaggaccgc agcatccttg 200
ccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtacttttg 300
ggtccttcag aggtcactgt atgtggcctg cactgccttg gccttcgagc 350
tggtgatgcg gtactgggag cccataccca aaggccctgt gttgtgggag 400
gctcgggctg agccatgggc cacctgggtg ccgctcctct gctttgtgct 450
ccatgtcatc tcctggctcc tcattcttag catccttctc gtctttgact 500
atgctgagct catgggcctc aaacagggtat actaccatgt gctggggctg 550
ggcgagcctc tggccctgaa gtctccccgg gctctcagac tcttctccca 600
cctgcgccac ccagtgtgtg tggagctgct gacagtgctg tgggtggtgc 650
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ccagctacaa agaaaactcc acctgctctc tcggccccag gatggggagg 800
cagagtggag agctcactct ggttacaaagc cctgtttctc ctctccact 850
gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900
caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950
ctctgggtcc agctccatac cctaaattct gagtttcagc cactgaactc 1000
caaggctcac ttctcaccag caaggaagag tggggtatg aagtcactctg 1050
tccttccact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100
aaggaaagga tctgcctga cactccctt ggcactgtta cttgcctctg 1150
cgctcagggt gtcccttct gcaccgctgg ctccactcc aagaagggtg 1200
accagggtct gcaagttcaa cggtcatagc tgtccctcca gcccacaacc 1250
ttgcctcacc actccgggc ctagtctctg cacctcctta ggccctgcct 1300
ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350
atgaactggg gctccctgct ctcccgagga agatgctctg caggaaaata 1400
aaagtcagcc tttttctaaa aaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe	
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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
				65				70					75	
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

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caacaaaaaa cttaagcttt aatttcattc ggaattccac agttttctta 200
gtccccctgga cccggttgac ctgttggtc ttcccgctgg ctgctctatc 250
acgtggtgct tcccgactac tcaccccgag tgtaagaac cttcggtctg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
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acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaa 550
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aaatgttggc attgtcctta gaggatgaac accttcttta tgggtgacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacct 800
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tgaagacaga cactgatgtt tcatcaata ctggcaattt agtgaagtat 900
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taaaagtga cattcatatt ccagaagaca caaatcttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
cttttcttcc aaggagatca tcaacttttg gcaggctatg ctaaggaa 1300
cccatgcca ttattaactc cacattctac aaaaagccta gaaggacagg 1350
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ggaggctcag gtgctggctt aactgaact gaaactcatg aaaaaccag 1450
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gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
 gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650
 aacaatgtag agtttttatt attgaacaat gtagtcaatt gaagggtttg 1700
 tgtatatcctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
 aaaaaacttc ttcactgaag ttatactgaa caaaatttta cctgtttttg 1800
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgtttttta atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcaactccatt aatgtaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaatattt 2050
 tactgtggtg atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209
 <211> 331
 <212> PRT
 <213> Homo sapiens

<400> 209
 Met Ala Ser Ala Leu Trp Thr Val Leu Pro Ser Arg Met Ser Leu
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 Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe
 20 25 30
 Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu
 35 40 45
 Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg
 50 55 60
 Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His
 65 70 75
 Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp
 80 85 90
 Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys
 95 100 105
 Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln
 110 115 120
 Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp
 125 130 135
 Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp
 140 145 150
 Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp
 155 160 165

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp
				170					175					180
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu
				185					190					195
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile
				200					205					210
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser
				215					220					225
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly
				230					235					240
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu
				245					250					255
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val
				260					265					270
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu
				275					280					285
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys
				290					295					300
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu
				305					310					315
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His
				320					325					330

Tyr

<210> 210
 <211> 745
 <212> DNA
 <213> Homo sapiens

<400> 210
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 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
 actctttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300
 tgccctccat tcaatccctt gatgcaactgg tcaaggaaaa gaagcttcag 350
 ggtaaggggac caggaggacc acctcccaag ggctgatgt actcagtcaa 400
 cccaaacaaa gtcgatgacc tgagcaagtt cggaacaaac attgcaaaca 450
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agagccaagc 500
 ctgttttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtggtt ttaccatgt cattctgaaa tttttctcta ctagttaatgt 700
ttgattttct taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211

<211> 185

<212> PRT

<213> Homo sapiens

<400> 211

Met	Lys	Phe	Thr	Ile	Val	Phe	Ala	Gly	Leu	Leu	Gly	Val	Phe	Leu
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Ala	Pro	Ala	Leu	Ala	Asn	Tyr	Asn	Ile	Asn	Val	Asn	Asp	Asp	Asn
			20						25					30
Asn	Asn	Ala	Gly	Ser	Gly	Gln	Gln	Ser	Val	Ser	Val	Asn	Asn	Glu
			35						40					45
His	Asn	Val	Ala	Asn	Val	Asp	Asn	Asn	Gly	Trp	Asp	Ser	Trp	
			50						55					60
Asn	Ser	Ile	Trp	Asp	Tyr	Gly	Asn	Gly	Phe	Ala	Ala	Thr	Arg	Leu
			65						70					75
Phe	Gln	Lys	Lys	Thr	Cys	Ile	Val	His	Lys	Met	Asn	Lys	Glu	Val
			80						85					90
Met	Pro	Ser	Ile	Gln	Ser	Leu	Asp	Ala	Leu	Val	Lys	Glu	Lys	Lys
			95						100					105
Leu	Gln	Gly	Lys	Gly	Pro	Gly	Gly	Pro	Pro	Pro	Lys	Gly	Leu	Met
			110						115					120
Tyr	Ser	Val	Asn	Pro	Asn	Lys	Val	Asp	Asp	Leu	Ser	Lys	Phe	Gly
			125						130					135
Lys	Asn	Ile	Ala	Asn	Met	Cys	Arg	Gly	Ile	Pro	Thr	Tyr	Met	Ala
			140						145					150
Glu	Glu	Met	Gln	Glu	Ala	Ser	Leu	Phe	Phe	Tyr	Ser	Gly	Thr	Cys
			155						160					165
Tyr	Thr	Thr	Ser	Val	Leu	Trp	Ile	Val	Asp	Ile	Ser	Phe	Cys	Gly
			170						175					180
Asp	Thr	Val	Glu	Asn										
			185											

<210> 212

<211> 1706

<212> DNA

<213> Homo sapiens

<400> 212

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 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagtcttc gaaccaatgt gttgttcga tttcaaccag agactatagc 400
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgccaa 450
 ctcgccccca ttggtttctt ctttttggtg ctacagaaga ggaaatccag 500
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600
 ccaaatataa agcaaaggga ttgaatccgg atggaactcc agccctttca 650
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<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

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				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
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<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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 tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250
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 agaactgggt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400
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 agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
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<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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 ctctgtaacg gcagtttggt ccgatacaag caccctctctg aggaggagct 200
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<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

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				20					25					30	
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu	
				35					40					45	
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg	
				50					55					60	
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser	
				65					70					75	
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr	
				80					85					90	
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp	
				95					100					105	
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr	
				110					115					120	
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile	
				125					130					135	
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met	
				140					145					150	
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly	
				155					160					165	
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	
				170					175					180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	
				185					190					195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	
				200					205					210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	
				215					220					225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	
				230					235					240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	
				245					250					255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	
				260					265					270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	
				275					280					285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu	

290					295					300				
Thr	Arg	Phe	Ser	Leu	Leu	Ser	Asp	Ser	Ala	Phe	Asp	Ser	Gly	Arg
				305					310					315
Leu	Trp	Leu	Leu	Val	Val	Leu	Cys	Leu	Leu	Arg	Leu	Ala	Val	Thr
				320					325					330
Arg	Pro	His	Leu	Gln	Ala	Tyr	Leu	Cys	Leu	Ala	Lys	Ala	Arg	Val
				335					340					345
Glu	Gln	Leu	Arg	Arg	Glu	Ala	Gly	Arg	Ile	Glu	Ala	Arg	Glu	Ile
				350					355					360
Gln	Gln	Arg	Val	Val	Arg	Val	Tyr	Cys	Tyr	Val	Thr	Val	Val	Ser
				365					370					375
Leu	Gln	Tyr	Leu	Thr	Pro	Leu	Ile	Leu	Thr	Leu	Asn	Cys	Thr	Leu
				380					385					390
Leu	Leu	Lys	Thr	Leu	Gly	Gly	Tyr	Ser	Trp	Gly	Leu	Gly	Pro	Ala
				395					400					405
Pro	Leu	Leu	Ser	Pro	Asp	Pro	Ser	Ser	Ala	Ser	Ala	Ala	Pro	Ile
				410					415					420
Gly	Ser	Gly	Glu	Asp	Glu	Val	Gln	Gln	Thr	Ala	Ala	Arg	Ile	Ala
				425					430					435
Gly	Ala	Leu	Gly	Gly	Leu	Leu	Thr	Pro	Leu	Phe	Leu	Arg	Gly	Val
				440					445					450
Leu	Ala	Tyr	Leu	Ile	Trp	Trp	Thr	Ala	Ala	Cys	Gln	Leu	Leu	Ala
				455					460					465
Ser	Leu	Phe	Gly	Leu	Tyr	Phe	His	Gln	His	Leu	Ala	Gly	Ser	
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<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
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 ggaggagctt cgggcccttg cggggaagcc gaggccaga ggcaggaaag 200
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 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgcctt 300
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<210> 218
<211> 2571
<212> DNA
<213> Homo sapiens

<400> 218
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<210> 219
 <211> 632
 <212> PRT
 <213> Homo sapiens

<400> 219
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Leu Cys Lys Gly	Ala Ser His	Tyr Gly Leu	Thr Lys Asp Arg Lys
	35	40	45
Arg Arg Ser Gln	Asp Gly Cys	Pro Asp Gly	Cys Ala Ser Leu Thr
	50	55	60
Ala Thr Ala Pro	Ser Pro Glu	Val Ser Ala	Ala Ala Thr Ile Ser
	65	70	75
Leu Met Thr Asp	Glu Pro Gly	Leu Asp Asn	Pro Ala Tyr Val Ser
	80	85	90
Ser Ala Glu Asp	Gly Gln Pro	Ala Ile Ser	Pro Val Asp Ser Gly
	95	100	105
Arg Ser Asn Arg	Thr Arg Ala	Arg Pro Phe	Glu Arg Ser Thr Ile
	110	115	120
Arg Ser Arg Ser	Phe Lys Lys	Ile Asn Arg	Ala Leu Ser Val Leu
	125	130	135
Arg Arg Thr Lys	Ser Gly Ser	Ala Val Ala	Asn His Ala Asp Gln
	140	145	150
Gly Arg Glu Asn	Ser Glu Asn	Thr Thr Ala	Pro Glu Val Phe Pro
	155	160	165
Arg Leu Tyr His	Leu Ile Pro	Asp Gly Glu	Ile Thr Ser Ile Lys
	170	175	180
Ile Asn Arg Val	Asp Pro Ser	Glu Ser Leu	Ser Ile Arg Leu Val
	185	190	195
Gly Gly Ser Glu	Thr Pro Leu	Val His Ile	Ile Ile Gln His Ile
	200	205	210
Tyr Arg Asp Gly	Val Ile Ala	Arg Asp Gly	Arg Leu Leu Pro Gly
	215	220	225
Asp Ile Ile Leu	Lys Val Asn	Gly Met Asp	Ile Ser Asn Val Pro
	230	235	240
His Asn Tyr Ala	Val Arg Leu	Leu Arg Gln	Pro Cys Gln Val Leu
	245	250	255
Trp Leu Thr Val	Met Arg Glu	Gln Lys Phe	Arg Ser Arg Asn Asn
	260	265	270
Gly Gln Ala Pro	Asp Ala Tyr	Arg Pro Arg	Asp Asp Ser Phe His
	275	280	285
Val Ile Leu Asn	Lys Ser Ser	Pro Glu Glu	Gln Leu Gly Ile Lys
	290	295	300
Leu Val Arg Lys	Val Asp Glu	Pro Gly Val	Phe Ile Phe Asn Val
	305	310	315
Leu Asp Gly Gly	Val Ala Tyr	Arg His Gly	Gln Leu Glu Glu Asn

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Pro	Glu	Ser	Ala	Ala	His	Leu	Ile	Gln	Ala	Ser	Glu	Arg	Arg	Val
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His	Leu	Val	Val	Ser	Arg	Gln	Val	Arg	Gln	Arg	Ser	Pro	Asp	Ile
				365					370					375
Phe	Gln	Glu	Ala	Gly	Trp	Asn	Ser	Asn	Gly	Ser	Trp	Ser	Pro	Gly
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Pro	Gly	Glu	Arg	Ser	Asn	Thr	Pro	Lys	Pro	Leu	His	Pro	Thr	Ile
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Thr	Cys	His	Glu	Lys	Val	Val	Asn	Ile	Gln	Lys	Asp	Pro	Gly	Glu
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Ser	Leu	Gly	Met	Thr	Val	Ala	Gly	Gly	Ala	Ser	His	Arg	Glu	Trp
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Asp	Leu	Pro	Ile	Tyr	Val	Ile	Ser	Val	Glu	Pro	Gly	Gly	Val	Ile
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Ser	Arg	Asp	Gly	Arg	Ile	Lys	Thr	Gly	Asp	Ile	Leu	Leu	Asn	Val
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Asp	Gly	Val	Glu	Leu	Thr	Glu	Val	Ser	Arg	Ser	Glu	Ala	Val	Ala
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Leu	Leu	Lys	Arg	Thr	Ser	Ser	Ser	Ile	Val	Leu	Lys	Ala	Leu	Glu
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Val	Lys	Glu	Tyr	Glu	Pro	Gln	Glu	Asp	Cys	Ser	Ser	Pro	Ala	Ala
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Leu	Asp	Ser	Asn	His	Asn	Met	Ala	Pro	Pro	Ser	Asp	Trp	Ser	Pro
				515					520					525
Ser	Trp	Val	Met	Trp	Leu	Glu	Leu	Pro	Arg	Cys	Leu	Tyr	Asn	Cys
				530					535					540
Lys	Asp	Ile	Val	Leu	Arg	Arg	Asn	Thr	Ala	Gly	Ser	Leu	Gly	Phe
				545					550					555
Cys	Ile	Val	Gly	Gly	Tyr	Glu	Glu	Tyr	Asn	Gly	Asn	Lys	Pro	Phe
				560					565					570
Phe	Ile	Lys	Ser	Ile	Val	Glu	Gly	Thr	Pro	Ala	Tyr	Asn	Asp	Gly
				575					580					585
Arg	Ile	Arg	Cys	Gly	Asp	Ile	Leu	Leu	Ala	Val	Asn	Gly	Arg	Ser
				590					595					600
Thr	Ser	Gly	Met	Ile	His	Ala	Cys	Leu	Ala	Arg	Leu	Leu	Lys	Glu
				605					610					615
Leu	Lys	Gly	Arg	Ile	Thr	Leu	Thr	Ile	Val	Ser	Trp	Pro	Gly	Thr
				620					625					630

Phe Leu

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttctcttc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatacagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataacatgg ctacattgca 300
 tccagggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaacct 450
 ctggagtctc tgatcaaaga cgtggattgg ttctgcttg ggtcacccat 500
 tgagaaaact tgcaaacata tccctttgta taagggggaa gtgggtgaaa 550
 acacacataa tgtcgggtgt ggaggctgtg caaaggctgg gtcctctggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttctttccca atgccccaac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
 ggcacgagcc aggaactagg aggttctcac tgcccgagca gaggccctac 50
 acccaccgag gcattggggct ccctgggctg ttctgcttgg ccgtgctggc 100
 tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150
 ccattgccta caaagtcctg gaagttttcc ccaagggcgc ctgggtgctc 200
 ataacctgct gtgcacccca gccaccacgc cccatcacct attccctctg 250
 tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300
 cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgctc 350
 acctacttct gccggggcgc ctccacctca ggtgcccatg tggacagtgc 400
 caggctacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450
 gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
 atctgccagg cgtcctcggg cagcccacct atcaccaaca gctgatcgg 550
 gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600
 ccaacttctc cttcctgccg agccagacat cggactggtt ctggtgccac 650
 gctgcaaaac acgccaatgt ccagcacagc gccctcacag tggtgcccc 700
 aggtggtgac cagaagatgg aggactggca gggccccctg gagagcccca 750
 tccttgccct gccgctctac aggagcaccg gccgtctgag tgaagaggag 800
 tttggggggg tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850
 agccatgtagaatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser
1 5 10 15

Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met
260 265

<210> 224
<211> 1297
<212> DNA
<213> Homo sapiens

<400> 224
ggctcctaataat ggcagcagcc gccgctacca agatccttct gtgcctcccg 50
cttctgtctcc tgcgtgccgg ctggtcccg gctgggcgag ccgacctca 100
ctctctttgc tatgacatca ccgtcatccc taagtcaga cctggaccac 150
ggtggtgtgc ggttcaaggc cagggtgatg aaaagacttt tcttcactat 200
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
aaatgtcaca acggcctgga aggcacagaa ccagtgactg agagaggttg 300
tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
cccaaggaaac ccctcacct gcaggcaagg atgtcttctg agcagaaagc 400
tgaaggacac agcagtgatg ctggcagtt cagtttcgat ggcagatct 450
tcctcctctt tgactcagag aagagaatgt ggacaacggt tcactctgga 500
gccagaaaga tgaaagaaaa gtgggagaat gacaagggtg tggccatgct 550
cttcattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
tgatgggcat ggcagcacc ctggagccaa gtgcaggagc accactcgcc 650
atgtcctcag gcacaaccca actcagggcc acagccacca ccctcatcct 700
ttgctgcctc ctcatcatcc tccctgctt catcctccct ggcactctgag 750
gagagtcctt tagagtgaca ggttaaagct gatacaaaaa ggctcctgtg 800
agcacggtct tgatcaaaact cgccttctg tctggccagc tgcccacgac 850
ctacggtgta tgtccagtg cctccagcag atcatgatga catcatggac 900
ccaatagctc attcactgcc ttgattcctt tgccaacaa ttttaccagc 950
agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
ttctgcact taaagttctg gctgactaaa caagatatat cattttcttt 1050
cttctctttt tgtttgaaa atcaagtact tctttgaatg atgatctctt 1100
tcttgcaaat gatattgtca gtaaaataat caggttagac ttcagacctc 1150
tggggattct ttccgtgtcc tgaagagaa tttttaaatt atttaataag 1200
aaaaaattta tattaatgat tgtttcctt agtaatttat tgttctgtac 1250
tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaa 1297

<210> 225
<211> 246
<212> PRT
<213> Homo sapiens

<400> 225

Met	Ala	Ala	Ala	Ala	Ala	Thr	Lys	Ile	Leu	Leu	Cys	Leu	Pro	Leu	
1					5				10						15
Leu	Leu	Leu	Leu	Ser	Gly	Trp	Ser	Arg	Ala	Gly	Arg	Ala	Asp	Pro	
				20					25					30	
His	Ser	Leu	Cys	Tyr	Asp	Ile	Thr	Val	Ile	Pro	Lys	Phe	Arg	Pro	
				35					40					45	
Gly	Pro	Arg	Trp	Cys	Ala	Val	Gln	Gly	Gln	Val	Asp	Glu	Lys	Thr	
				50					55					60	
Phe	Leu	His	Tyr	Asp	Cys	Gly	Asn	Lys	Thr	Val	Thr	Pro	Val	Ser	
				65					70					75	
Pro	Leu	Gly	Lys	Lys	Leu	Asn	Val	Thr	Thr	Ala	Trp	Lys	Ala	Gln	
				80					85					90	
Asn	Pro	Val	Leu	Arg	Glu	Val	Val	Asp	Ile	Leu	Thr	Glu	Gln	Leu	
				95					100					105	
Arg	Asp	Ile	Gln	Leu	Glu	Asn	Tyr	Thr	Pro	Lys	Glu	Pro	Leu	Thr	
				110					115					120	
Leu	Gln	Ala	Arg	Met	Ser	Cys	Glu	Gln	Lys	Ala	Glu	Gly	His	Ser	
				125					130					135	
Ser	Gly	Ser	Trp	Gln	Phe	Ser	Phe	Asp	Gly	Gln	Ile	Phe	Leu	Leu	
				140					145					150	
Phe	Asp	Ser	Glu	Lys	Arg	Met	Trp	Thr	Thr	Val	His	Pro	Gly	Ala	
				155					160					165	
Arg	Lys	Met	Lys	Glu	Lys	Trp	Glu	Asn	Asp	Lys	Val	Val	Ala	Met	
				170					175					180	
Ser	Phe	His	Tyr	Phe	Ser	Met	Gly	Asp	Cys	Ile	Gly	Trp	Leu	Glu	
				185					190					195	
Asp	Phe	Leu	Met	Gly	Met	Asp	Ser	Thr	Leu	Glu	Pro	Ser	Ala	Gly	
				200					205					210	
Ala	Pro	Leu	Ala	Met	Ser	Ser	Gly	Thr	Thr	Gln	Leu	Arg	Ala	Thr	
				215					220					225	
Ala	Thr	Thr	Leu	Ile	Leu	Cys	Cys	Leu	Leu	Ile	Ile	Leu	Pro	Cys	
				230					235					240	
Phe	Ile	Leu	Pro	Gly	Ile										
				245											

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaaac ccattctatac aaactatata ttttcatttc 50

tgetgctagc tgccttgggc ctcacaattt tcattctggt ttctgacttt 100

caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

ggttttaatt ttggtggtag cctcaccoca attctggtgt ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttgat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttctgt atcatccttt tcaataaaact 700
 gtattcattt tgaaaaaaa aaaaaaaaa aaaaa 735

<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

Met	Glu	Leu	Ile	Pro	Thr	Ile	Thr	Ser	Trp	Arg	Val	Leu	Ile	Leu
1				5					10				15	
Val	Val	Ala	Leu	Thr	Gln	Phe	Trp	Cys	Gly	Phe	Leu	Cys	Arg	Gly
			20						25				30	
Phe	His	Leu	Gln	Asn	His	Glu	Leu	Trp	Leu	Leu	Ile	Lys	Arg	Glu
			35						40				45	
Phe	Gly	Phe	Tyr	Ser	Lys	Ser	Gln	Tyr	Arg	Thr	Trp	Gln	Lys	Lys
			50						55				60	
Leu	Ala	Glu	Asp	Ser	Thr	Trp	Pro	Pro	Ile	Asn	Arg	Thr	Asp	Tyr
			65						70				75	
Ser	Gly	Asp	Gly	Lys	Asn	Gly	Phe	Tyr	Ile	Asn	Gly	Gly	Tyr	Glu
			80						85				90	
Ser	His	Glu	Gln	Ile	Pro	Lys	Arg	Lys	Leu	Lys	Leu	Gly	Gly	Gln
			95						100				105	
Pro	Thr	Glu	Gln	His	Phe	Trp	Ala	Arg	Leu					
			110						115					

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

gttctccttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50
 cacaccatga agctcttggtg gcaggtaact gtgcaccacc acacctggaa 100

tgcacatctg ctcccggtcg ttacacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gcctcagccg ggcgccagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250
 cctctccgag gtcccgcagg gtattccctc gaacaccocg tacctcaacc 300
 tcattggagaa caacatccag atgatccagg ccgacacott ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcac cctagcgggg cctttgaata cctgtccaag 500
 ctgcggggagc tctggcttcg caacaacccc atcgaaagca tccctcttta 550
 cgccttcaac cgggtgcctt cctcatcg cctggacttg ggggagctca 600
 agaagctgga gtatatctct gaggggagctt ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 ccccttggtg gggctggagg agctggagat gtcagggaac cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
 ggtcttactt ttggaactca acttggccca caataacctc tcttctttgc 900
 cccatgacct ctttaccocg ctgaggtacc tgggtggagt gcactctac 950
 cacaacccct ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000
 tcgagagtat ataccacca attccacctg ctgtggccgc tgtcatgctc 1050
 ccatgcacat gcgaggcgc tacctcgtgg agtgggacca ggcctccttc 1100
 cagtgtctcg ccccttcat catggacgca cctcgagacc tcaacatttc 1150
 tgagggctcg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200
 tgaagtgggt gctgcccaat gggacagtgc tcagccacgc ctcccgccac 1250
 ccaaggtatc ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300
 gctttcagac actgggggtg acacatgcat ggtgaccaat gttgcaggca 1350
 actccaacgc ctcggcctac ctcaatgtga gcacggctga gcttaacacc 1400
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
 gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1500
 gttaccagcc ggcataatcc acctctacca cgtgtctcat tcagactacc 1550
 cgtgtgccca agcagggtgc agtaccocg acagacacca ctgacaagat 1600
 gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650
 gcttttgagg agtgactctg ctagtgcgc ccatgttgat tgtcttctat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750
 tgttgagata atccaggttg acgaagacat cccagcagca acatccgcag 1800
 cagcaacagc agtcccgccc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 caggaaactc aaatatgact ccctccccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttcttgata tgcttatata ttaagtctat gggtgtgta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn	1	5	10	15
Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile	20	25	30	
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn	35	40	45	
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val	50	55	60	
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser	65	70	75	
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile	80	85	90	
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln	95	100	105	
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn	110	115	120	
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu	125	130	135	
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg	140	145	150	
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr	155	160	165	
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu	170	175	180	
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu				

	185		190		195
Phe Asn Leu Lys	Tyr Leu Asn Leu Gly	Met Cys Asn Ile Lys Asp			
	200	205		210	
Met Pro Asn Leu Thr	Pro Leu Val Gly	Leu Glu Glu Leu Glu Met			
	215	220		225	
Ser Gly Asn His Phe	Pro Glu Ile Arg	Pro Gly Ser Phe His Gly			
	230	235		240	
Leu Ser Ser Leu Lys	Lys Leu Trp Val	Met Asn Ser Gln Val Ser			
	245	250		255	
Leu Ile Glu Arg Asn	Ala Phe Asp Gly	Leu Ala Ser Leu Val Glu			
	260	265		270	
Leu Asn Leu Ala His	Asn Asn Leu Ser	Ser Leu Pro His Asp Leu			
	275	280		285	
Phe Thr Pro Leu Arg	Tyr Leu Val Glu	Leu His Leu His His Asn			
	290	295		300	
Pro Trp Asn Cys Asp	Cys Asp Ile Leu Trp	Leu Ala Trp Trp Leu			
	305	310		315	
Arg Glu Tyr Ile Pro	Thr Asn Ser Thr	Cys Cys Gly Arg Cys His			
	320	325		330	
Ala Pro Met His Met	Arg Gly Arg Tyr	Leu Val Glu Val Asp Gln			
	335	340		345	
Ala Ser Phe Gln Cys	Ser Ala Pro Phe	Ile Met Asp Ala Pro Arg			
	350	355		360	
Asp Leu Asn Ile Ser	Glu Gly Arg Met	Ala Glu Leu Lys Cys Arg			
	365	370		375	
Thr Pro Pro Met Ser	Ser Val Lys Trp	Leu Leu Pro Asn Gly Thr			
	380	385		390	
Val Leu Ser His Ala	Ser Arg His Pro	Arg Ile Ser Val Leu Asn			
	395	400		405	
Asp Gly Thr Leu Asn	Phe Ser His Val	Leu Leu Ser Asp Thr Gly			
	410	415		420	
Val Tyr Thr Cys Met	Val Thr Asn Val	Ala Gly Asn Ser Asn Ala			
	425	430		435	
Ser Ala Tyr Leu Asn	Val Ser Thr Ala	Glu Leu Asn Thr Ser Asn			
	440	445		450	
Tyr Ser Phe Phe Thr	Thr Val Thr Val	Glu Thr Thr Glu Ile Ser			
	455	460		465	
Pro Glu Asp Thr Thr	Arg Lys Tyr Lys	Pro Val Pro Thr Thr Ser			
	470	475		480	
Thr Gly Tyr Gln Pro	Ala Tyr Thr Thr	Ser Thr Thr Val Leu Ile			
	485	490		495	
Gln Thr Thr Arg Val	Pro Lys Gln Val	Ala Val Pro Ala Thr Asp			

500	505	510
Thr Thr Asp Lys Met Gln Thr Ser Leu	Asp Glu Val Met Lys Thr	
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val	Ala Val Thr Leu Leu Ala	
530	535	540
Ala Ala Met Leu Ile Val Phe Tyr Lys	Leu Arg Lys Arg His Gln	
545	550	555
Gln Arg Ser Thr Val Thr Ala Ala Arg	Thr Val Glu Ile Ile Gln	
560	565	570
Val Asp Glu Asp Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr Ala	
575	580	585
Ala Pro Ser Gly Val Ser Gly Glu Gly	Ala Val Val Leu Pro Thr	
590	595	600
Ile His Asp His Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His Gly	
605	610	615
Ala His Trp Thr Glu Asn Ser Leu Gly	Asn Ser Leu His Pro Thr	
620	625	630
Val Thr Thr Ile Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr Lys	
635	640	645
Asp Lys Val Gln Glu Thr Gln Ile		
650		

<210> 230
 <211> 2846
 <212> DNA
 <213> Homo sapiens

<400> 230
 cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50
 tggggctcac ttttcttcag ctcttctca tctcgtcctt gccaaagagag 100
 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagatgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaaga 200
 gggaagtctg gggttataacc atcccttgct gcaggaatga ggagaatgag 250
 tgtgactcct gcctgatcca cccaggttgt accatctttg aaaactgcaa 300
 gagctgccga aatggctcat ggggggggtac ctggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagatgc 400
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450
 aagctatccc ctaaagtgc actgtgaatg gaccattcat gctaaacctg 500
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgogatgg 600
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcactccac gtccctcttc actccgatgg ctccaagaat 700
 tttgacgggt tccatgccat ttatgaggag atcacagcat gtcctcctc 750
 cccttgtttc catgaaggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttaggcaggc tatactgggc agcgtgtga aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggcctgggc ttatcaacgg acgccatgct aaaattggca 950
 ccgtggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcagggaaac agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100
 ttcttcgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
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 cactccttga gaagtgttc tgtatatccg tctgtacgtg tgtcattgag 2250

tgaagcagtg tgggcctgaa gtgtgatttg gctgtgaac ttggtgtgc 2300
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<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe Val Met Leu Ser Leu Glu Phe Asp	Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn	Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro	Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His	Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu	Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr	Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala	Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn	Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr	Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr	Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn	Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln	Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu	Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr	Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu	Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu	Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys	Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys	Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro	Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly	Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly	Val His Asp Gly Ser Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn	
				485					490					495	
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	
				500					505					510	
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	
				515					520					525	
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser	
				530					535					540	
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	
				545					550					555	
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	
				560					565					570	
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	
				575					580					585	
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	
				590					595					600	
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	
				605					610					615	
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	
				620					625					630	
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	
				635					640					645	
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	
				650					655					660	
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	
				665					670					675	
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	
				680					685					690	
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	
				695					700					705	
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	
				710					715					720	

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgccctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtgggtgggt 200
gggccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250
aaggagttca tggctaattt ccataagacc ctcatcttgg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagaggggt gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750
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acagtggata ttttgggggt gttactgcc taagcagaga gcagtttttc 850
aaggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
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tgctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgttg 1100
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tgaccctgga tcttttggtg atgtttggaa gaactgattc tttgtttgca 1200
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cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
acatattaac taataataaa tatgtctatc aaatacctct gtagtataat 1950
gtgaaaaagc aaaa 1964

<210> 236
<211> 344
<212> PRT
<213> Homo sapiens

<220>
<221> Signal peptide
<222> 1-27
<223> Signal peptide

<220>
<221> N-glycosylation sites
<222> 4-7, 220-223, 335-338
<223> N-glycosylation sites

<220>
<221> Xylose isomerase proteins
<222> 191-201
<223> Xylose isomerase proteins

<400> 236
Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
1 5 10 15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
 335 340

<210> 237
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 237
 ccttacctca gaggccagag caagc 25

<210> 238
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 238
 gagcttcacgc cggtctgcgt tcacc 25

<210> 239
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 239
 cagggaatgta aagctttaca gagggcgccg atcctcggtc cccacc 46

<210> 240
 <211> 2567
 <212> DNA
 <213> Homo sapiens

<400> 240
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 gcgcgagttc tcgagctoca gctgcattcc ctccgcgtcc gccccacgct 100
 tctcccgcctc cgggcccgcg aatggcccag gcagtggtgt gcgcgctcgg 150
 ccgcacacctc tggcttgctt gcctcctgcc ctgggcccgg gcaggggtgg 200
 ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgcaccacg 250
 ggagcggtgg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
 cctggccctg cccgctgacg cccacctcta ccgcttcac tggatccaca 350
 ccccgcgtgt gttactggc aagatggaga aggggtctcag ctccaccatc 400
 cgtgtggtgc gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
 tgccgcgtgac tgctggatgt gccagcctgt gccagggggt tttgtgtgcc 500
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 gtctattata actattccat catcggggaco ttcaccgtga agctcaaatg 750
 ggtggcggag tgggaagagg tggagccgga tggcacgagg gctgtgaagc 800
 agaagaccgg ggacttctcc gcctcgtga agctgcagga aacctctcga 850
 ggcattcaag tgttggggcc caccctaatt cagacctcc aaaagatgac 900
 cgtgaccttg aacttcctgg ggagccctcc tctgactgtg tgctggcgctc 950
 tcaagcctga gtgcctccc ctggaggaag gggagtcca ccctgtgtcc 1000
 gtggccagca cagcgtaaa cctgaccac accttcaggg accctgggga 1050
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 accacaagat ccagggtgtg ccctccagaa tccagccggc tgtctttgct 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
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 cacctctgg ggtcaggtgc tgctgccaga tgtgctgtgg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
 gtcctccgcc ctctataagt ctgtcaaac ttacaccgtg tgagcactcc 1400
 ccctccccc ccatctcag tgttaactga ctgctgactt ggagtttcca 1450
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 cgtcacatgg gcatttcaga tgatcagetc tgtatctggt taagtcggtt 2000
 gctgggatgc accctgcact agagctgaaa ggaatttga cctccaagca 2050
 gccctgacag gttctgggcc cgggccctcc ctttgtgctt tgtctctgca 2100
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 agctactcgg gaggtcgtagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcaatg agcccagatg gcgccactgc actccagcct gagtgacaga 2550
 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241
 Met Ala Gln Ala Val Trp Ser Arg Leu Gly Arg Ile Leu Trp Leu
 1 5 10 15
 Ala Cys Leu Leu Pro Trp Ala Pro Ala Gly Val Ala Ala Gly Leu
 20 25 30
 Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala
 35 40 45
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser
 50 55 60
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile
 65 70 75
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser
 80 85 90
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val
 95 100 105
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val
 110 115 120
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly
 125 130 135
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser
 140 145 150
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp
 155 160 165
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp
 170 175 180
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr
 185 190 195

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctggaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgacccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggcccgt tgcctcctgc tcctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt ccacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgtctg 250
ggctgtctgtc atcgatcaaa gtgtgggatg tgtgtgaaga cgtagaacct 300
acctgccctg ccccgctccc ctcccttctt tatttattcc tgctgcccc 350
gaacataggt cttggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

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tgctggcctg gcctggatct tccacatgt tcctgttgct gccttttgat 100
agcctgattg tcaacctctt gggcattctc ctgactgtcc tcttcacctc 150
ccttctcggt ttcacatag tgccagccat ttttgagtc tccttttgta 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc ttacaagcc 300
ctaccaaac ggaatcattg caaaggatcc cacttacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caaactcca 400
gagttcgagc tctctgacat tttctacttt tgcggaaag gaatggagac 450
cattatggat gatgaggga caaagagatt ctacagagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttcagta catcagcctt 550
cggctcacgg tcctgtgggg gttaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtggga tacttgcaa atgggagggt taaggaattc 700
atgagtaaac atgttcactt aatgtgttac cggaatctgc tgcgagcgct 750
gacagccatc atcacctacc atgacaggga aaacagacca agaaatggtg 800
gcattctgtg ggccaatcat acctcaccga tcgatgtgat catcttggcc 850
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tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaaacctg 1050
catcaataat acatcggtga tgatgttaa aaagggaagt tttgaaattg 1100
gagccacagt ttacctgtt gctatcaaagt atgacctca atttggcgat 1150
gccttctgga acagagcaa atacgggatg gtgacgtacc tgctcggaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccata 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
 acagcaagat gatcgtgggg aaccacaagg acaggagccg ctctctgagcc 1450
 tgcctccagc tggctggggc caccgtgcmg ggtgccaacg ggctcagagc 1500
 tggagttgcc gcgcgcgcgc ccaactgtgt gtcctttcca gactccaggg 1550
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 cgggatccct gtgcaccccg cgcagcctac ccttggtggt ctaaacggat 1650
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 agtcgttga ggaatgccat taaagtgaac tccccacctt tgacgctgt 1750
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 cggtaacaaga gtctgttatg caagcccggtg tgccagggat gtgctggggg 1850
 cggccaccgc ctctccagga aaggcacagc taggcactg tggctggctt 1900
 cggcctcaac atgcgcgcgc gccttgagc tctgcagaca tgataggaa 1950
 gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
 tgctgctgct gatggggta ctaaaggag gggaagaggc caggtggggc 2050
 gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
 aactcccat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150
 tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
 gttgtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
 tgtttcaagt acagccccc aaaacggggc acggcaggcc tgagctcaga 2300
 gctgctgcac tgggctttgg atttgttctt gtgagtaaat aaaactggct 2350
 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
 1 5 10 15
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr Thr Asn Gly	Ile Ile Ala Lys Asp	Pro Thr Ser Leu Glu Glu	80	85	90
Glu Ile Lys Glu	Ile Arg Arg Ser Gly Ser Ser Lys Ala Leu Asp		95	100	105
Asn Thr Pro Glu	Phe Glu Leu Ser Asp	Ile Phe Tyr Phe Cys Arg	110	115	120
Lys Gly Met Glu	Thr Ile Met Asp Asp	Glu Val Thr Lys Arg Phe	125	130	135
Ser Ala Glu Glu	Leu Glu Ser Trp Asn	Leu Leu Ser Arg Thr Asn	140	145	150
Tyr Asn Phe Gln	Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp Gly	155	160	165
Leu Gly Val Leu	Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg Ile	170	175	180
Ala Leu Ala Phe	Thr Gly Ile Ser Leu	Leu Val Val Gly Thr Thr	185	190	195
Val Val Gly Tyr	Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met Ser	200	205	210
Lys His Val His	Leu Met Cys Tyr Arg	Ile Cys Val Arg Ala Leu	215	220	225
Thr Ala Ile Ile	Thr Tyr His Asp Arg	Glu Asn Arg Pro Arg Asn	230	235	240
Gly Gly Ile Cys	Val Ala Asn His Thr	Ser Pro Ile Asp Val Ile	245	250	255
Ile Leu Ala Ser	Asp Gly Tyr Tyr Ala	Met Val Gly Gln Val His	260	265	270
Gly Gly Leu Met	Gly Val Ile Gln Arg	Ala Met Val Lys Ala Cys	275	280	285
Pro His Val Trp	Phe Glu Arg Ser Glu	Val Lys Asp Arg His Leu	290	295	300
Val Ala Lys Arg	Leu Thr Glu His Val	Gln Asp Lys Ser Lys Leu	305	310	315
Pro Ile Leu Ile	Phe Pro Glu Gly Thr	Cys Ile Asn Asn Thr Ser	320	325	330
Val Met Met Phe	Lys Lys Gly Ser Phe	Glu Ile Gly Ala Thr Val	335	340	345
Tyr Pro Val Ala	Ile Lys Tyr Asp Pro	Gln Phe Gly Asp Ala Phe	350	355	360
Trp Asn Ser Ser	Lys Tyr Gly Met Val	Thr Tyr Leu Leu Arg Met	365	370	375
Met Thr Ser Trp	Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro Pro	380	385	390

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg
				395					400					405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu
				410					415					420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys
				425					430					435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His
				440					445					450
Lys	Asp	Arg	Ser	Arg	Ser									
				455										

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
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 ccctggccct cagctctcct ccagggatgg cgctggcggc ttgatgatc 100
 gcctcggca gcctcggcct ccacacctgg caggcccagg ctgttcccc 150
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtg 200
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
 atggcccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300
 ctgggaggac aagcgtcgag ggcttacctt gcccctggc ttcaaaagccc 350
 agaatggaat agccattatg gtctacacca actcatcgaa caccttgtac 400
 tgggagttga atcaggccgt gcggacgggc ggaggetccc gggagctcta 450
 catgaggcac tttcccttca aggccctgca tttctacctg atccgggccc 500
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggaggtg 550
 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtg 650
 ccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgtcttgg gccctggag agttccagct ctcaggggtt gggccctgaa 800
 agtccaacat ctgccactta ggagccctgg gaacgggtga cttcatatg 850
 acgaagaggo acctccagca gccttgagaa gcaagaacat gtttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttgccct ggggaggcca 950
 cagcagggct gagggaactc tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccacttgatt gaacgggtgt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggg attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu
1				5					10					15

His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly
			20						25					30

Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu
			35						40					45

Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala
				50					55					60

His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr
			65						70					75

Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys
			80						85					90

Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn
			95						100					105

Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly
			110						115					120

Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His
			125						130					135

Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly
			140						145					150

Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser
			155						160					165

Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly
			170						175					180

Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe
			185						190					195

Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu
			200						205					210

Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr
			215						220					225

Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro
			230						235					240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50

caacatgcct caccctcatc tatatccttt ggagctcac agggtcagca 100

gcctctggac ccgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150

tttcccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaa cctcttctg accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctacgaaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400

ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtotgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500

atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550

aatgagtcct ataattgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaacctgtgc agcagaaaact 650

tctcaagccc catccttgcc aggaagctct gtgaaggtgc tgctgatgac 700

ccagattcct ccatggctct cctgtgtctc ctgttggtgc cctcctgct 750

cagtctcttt gtaactggggc tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg togggaaact 850

cctaacatat gcccccatc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000

atgccagaca caccaaggct atttgccat gagaatgtta tctagacagc 1050

agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

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Gln Leu Thr Gly Ser	Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	
	20	25	30
Gly Ser Val Gly Gly	Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	
	35	40	45
Lys Gln Val Asp Ser	Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	
	50	55	60
Val Thr Ile Gln Pro	Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	
	65	70	75
Arg Asn Arg Glu Arg	Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	
	80	85	90
Lys Leu Ser Lys Leu	Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	
	95	100	105
Gly Ile Tyr Ser Ser	Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	
	110	115	120
Val Leu His Val Tyr	Glu His Leu Ser	Lys Pro Lys Val Thr Met	
	125	130	135
Gly Leu Gln Ser Asn	Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	
	140	145	150
Cys Cys Met Glu His	Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	
	155	160	165
Ala Leu Gly Gln Ala	Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	
	170	175	180
Pro Ile Ser Trp Arg	Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	
	185	190	195
Val Ala Arg Asn Pro	Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	
	200	205	210
Ala Arg Lys Leu Cys	Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	
	215	220	225
Met Val Leu Leu Cys	Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	
	230	235	240
Phe Val Leu Gly Leu	Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	
	245	250	255
Glu Glu Tyr Ile Glu	Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	
	260	265	270
Thr Pro Asn Ile Cys	Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	
	275	280	285
Thr Ile Pro His Thr	Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	
	290	295	300
Asn Thr Val Tyr Ser	Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	
	305	310	315
Pro His Ser Leu Leu	Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

320

325

330

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctggttcccc aacatgcctc accctcatct atatcctttg gcagetcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcgggt ccgttggtgg 100
ggcogtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agtcatcac tccagcagcc ctccaccag 350
gagtacgtgc tgcattgtcta cgagcacctg tcaaagccta aagtaccat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aacctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaaggtgct 650
gctgatgacc cagattcctc catggctctc ctgtgtctcc tgttggtgcc 700
cctcctgctc agtctctttg tactggggct atttcttttg tttctgaaga 750
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctt ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcacga tgccagacac accaaggcta tttgctatg agaattgtat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtcctgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtggt tgggactgac cctagtctgt gtccatgcag 100
aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
gaatggcata ctattatcct ggccctctgac aaaagagaaa agatagaaga 200
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
tctatggttg ctgacaaaa agaaaaggct ggtgaatatt ctgtgacgta 350
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
tctatcccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
acctcatcaa gaatcaaaga cttctttaa tttctcttg atacaccctt 800
gacaattttt catgaaatta ttctcttcc tgttcaataa atgattaccc 850
ttgcacttaa 860

<210> 256
<211> 180
<212> PRT
<213> Homo sapiens

<400> 256
Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
1 5 10 15
Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
20 25 30
Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
35 40 45
Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
50 55 60
Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
65 70 75
Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
80 85 90
Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
95 100 105
Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
110 115 120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
 tctcaaaacc ccattctctg ctttgagtgg tggttccag gaattatagg 200
 agcaggctcg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350
 ggctctctta aaaggctcct tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtggttttt caatgactct tgtgcacctc ctactgggtt 500
 caataaacc accagtaacg acaccatggc gagtggtgg agagcatcta 550
 gtttccactt cgattotgaa gaaaacaaac ataggcttat ccacttctca 600
 gtatttttag gtctattgct tgttgaatt ctggagggtcc tgtttgggct 650
 cagtcagata gtcacgggtt tccttggtg totgtgtgga gtctctaagc 700
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10 15
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35		40		45
Ser Cys Phe Glu	Trp 50	Trp Phe Pro Gly	Ile 55	Ile Gly Ala Gly	Leu 60
Met Ala Ile Pro	Ala 65	Thr Thr Met Ser	Leu 70	Thr Ala Arg Lys	Arg 75
Ala Cys Cys Asn	Asn 80	Arg Thr Gly Met	Phe 85	Leu Ser Ser Phe	Phe 90
Ser Val Ile Thr	Val 95	Ile Gly Ala Leu	Tyr 100	Cys Met Leu Ile	Ser 105
Ile Gln Ala Leu	Leu 110	Lys Gly Pro Leu	Met 115	Cys Asn Ser Pro	Ser 120
Asn Ser Asn Ala	Asn 125	Cys Glu Phe Ser	Leu 130	Lys Asn Ile Ser	Asp 135
Ile His Pro Glu	Ser 140	Phe Asn Leu Gln	Trp 145	Phe Phe Asn Asp	Ser 150
Cys Ala Pro Pro	Thr 155	Gly Phe Asn Lys	Pro 160	Thr Ser Asn Asp	Thr 165
Met Ala Ser Gly	Trp 170	Arg Ala Ser Ser	Phe 175	His Phe Asp Ser	Glu 180
Glu Asn Lys His	Arg 185	Leu Ile His Phe	Ser 190	Val Phe Leu Gly	Leu 195
Leu Leu Val Gly	Ile 200	Leu Glu Val Leu	Phe 205	Gly Leu Ser Gln	Ile 210
Val Ile Gly Phe	Leu 215	Gly Cys Leu Cys	Gly 220	Val Ser Lys Arg	Arg 225
Ser Gln Ile Val					

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataaagc 50
 caccatgagg ctgtcagtggt gtctcctgat ggtctcgtcg gccctttgct 100
 gctaccaggc ccatgctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtcttcttat tcttaagtga cgctgcggtta aacctccaag ttgccaaact 200
 taatccacot ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtccctggtgg 300
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaagggt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgccca gctcaggtga gccctcgcca aggtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtgac cctggccctt ctctactgg caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaagtca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc cactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gctgaagcc 500

taaacatggc cccagcacc tcctcccctg ggaggcctta tcctcaagga 550

aggacttctc tccaagggca ggetgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15
Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30
Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45
Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60
Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75
Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgtg 50
ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100
actcctgctg ctggttgttg gctcctggct actcgcccg ctcctggtt 150
ggacctatgc cttctataac aactgccgcc ggctccagt tttccacag 200
ccccaaaac ggaactggtt ttggggtcac ctgggcctga tcaactcact 250
agaggagggc ttgaaggact cgaccagat gtgggccacc tattcccagg 300
gctttacggg atggctgggt cccatcatcc ccttcacgt tttatgccac 350
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400
ggataatctc ttcacaggt tctgaagcc ctggctggga gaagggatac 450
tgtgtagtgg cggtgacaag tggagccgcc accgtcggat gctgaagccc 500
gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagta 700
atatattgcc accatcttgg agctcagtc ccttgtagag aaaagaagcc 750
agcatatcct ccagcacatg gactttctgt attacotctc ccatgacggg 800
cggcgcttcc acagggcctg ccgcctggtg catgaactca cagacgtgtg 850
catccgggag cggcgtcgca ccctccccc tcagggtatt gatgattttt 900
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcattg ttggaggcca tgacaccacg gccagtggcc 1050
 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcgacg ctaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgacctg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcattctccg atgtgcacc 1250
 caggacattg ttctoccaga tggccgagtc atccccaag gcattacctg 1300
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350
 ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc ttctccgca gggcccagga actgcatcgg 1450
 gcaggcggtc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcacttccg gttcctgccg gaccacactg agccccgag gaagctggaa 1550
 ttgatcatgc gcgcgaggg cgggctttgg ctgcgggtgg agccccgaa 1600
 tgtaggcttg cagtgaactt ctgaccatc cactgtttt tttgcagatt 1650
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
 125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	
				140					145					150	
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	
				155					160					165	
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	
				170					175					180	
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	
				185					190					195	
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	
				200					205					210	
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	
				215					220					225	
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	
				230					235					240	
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	
				245					250					255	
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	
				260					265					270	
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	
				275					280					285	
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	
				290					295					300	
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	
				305					310					315	
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	
				320					325					330	
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	
				335					340					345	
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	
				350					355					360	
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	
				365					370					375	
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	
				380					385					390	
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	
				395					400					405	
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	
				410					415					420	
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	
				425					430					435	
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	
				440					445					450	

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
 455 460 465
 Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
 470 475 480
 Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
 485 490 495
 Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
 500 505 510
 Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
 515 520

<210> 265
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 265
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
 ctggcctcct gctgttttgc ttacacagga ttcttaaadc ctctcttacc 100
 tcttcctctc ctgactcca gggaaatadc ctttcaactc tcagcacctc 150
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
 cagatattgc cagagatgct ggtgtcagaa agaggggata ttctcaggaa 250
 agcagactca agtaccaca tttttaaccc aagaggaaat ttgagaaagt 300
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcactctttg 350
 gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
 gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagt 500
 tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctgagaaata 550
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 266
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
 1 5 10 15
 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
 20 25 30
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
 35 40 45
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
 50 55 60

Gly	Ala	Glu	Arg	Gly	Asp	Ile	Leu	Arg	Lys	Ala	Asp	Ser	Ser	Thr
				65					70					75
Asn	Ile	Phe	Asn	Pro	Arg	Gly	Asn	Leu	Arg	Lys	Phe	Gln	Asp	Phe
				80					85					90
Ser	Gly	Gln	Asp	Pro	Asn	Ile	Leu	Leu	Ser	His	Leu	Leu	Ala	Arg
				95					100					105
Ile	Trp	Lys	Pro	Tyr	Lys	Lys	Arg	Glu	Thr	Pro	Asp	Cys	Phe	Trp
				110					115					120

Lys Tyr Cys Val

<210> 267
 <211> 654
 <212> DNA
 <213> Homo sapiens

<400> 267
 gaacattttt agttcccaag gaatgtacat cagccccacg gaagctaggc 50
 cacctctggg atgggggtgc tggtttaaaa caaacgccag tcatctata 100
 taaggacctg acagccacca ggcaccacct cgcgcaggaa ctgcaggccc 150
 acctgtctgc aaccagctg aggccatgcc ctcccaggg accgtctgca 200
 gctcctctgt cctcggcatg ctctggctgg acttggccat ggcaggctcc 250
 agcttctcga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
 gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctccgcc 350
 cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400
 ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
 gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
 aggccaaaga ggcgccagcc gacaagtgat cgcccacaag cttactcac 550
 ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600
 caactccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
 tgta 654

<210> 268
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 268
 Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met
 1 5 10 15
 Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
 20 25 30
 Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
 35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
			65						70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
			80						85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
			95						100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
			110						115					

<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

cgggccacagc tggcatgctc tgcctgatcg ccatcctgct gtatgtcctc 50

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agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcagggtg 150

cagaccctga tagtcgtgat catcgggatg ctctgtgctcc tgotggactt 200

tcttggttg gtgcacctgg gccagctgct catcttcac atctacctga 250

gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300

gctgctcatc ttacacctct acttgagtat gtcctaacc ctgagcccc 350

cacgctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400

cagcctctcc cagaagtgag atcatggaca aaaagggcaa atcacaggaa 450

gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500

gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550

tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600

aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650

aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700

tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750

gttgctgaac gacggagggt aaactcccca gccccaagaa aacctgtgtt 800

ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850

tgggccagct gcaaagcgtc ttccattctc tgggcagtgg tggccccgag 900

gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950

aggccagccc ccaagaatgc cctgctcctg acagcttggc caacccctgg 1000

tcagggcaga gggagtggg tgggtcaggc tctgggctca cctccatctc 1050

cagagcatcc cctgacctgca gttgtggcaa gaacgccag ctcagaatga 1100
 acacacccca ccaagagcct cctgttcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatacttt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
 accatggcca agatggagct ctcgaaggcc ttctctggcc agcggaact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaagtgcc caagcccctg 200
 tgcgagaaaag gtctggcagc caagtgttt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tcctgtgagg aaactgtgga agaaccaggg gagagggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagagggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccccaactc tccgatttgg agggaagcgg 500
 ttgatggaga aggcttccct ccctcccct cccttggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcatcagct tcctcctgct actaacagac ttgctactca ctgggaaccc 650
 tgcctgtggg ctcaaaactga gcgcctttgc tgctgtttcc tctgtcctgt 700
 caggctctcct ggggatggtg gccacatga tgtattcaca agtcttccaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
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 cggctgtcac caccttaac acgtacacca ggatgggtgct ggagttcaag 900
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 ccatacgtgt ttccctcggc ggctgtcaag tgcagccccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050
 gagggagtgc acttctactc cgagctgcgg aacaagggat ttcaaaagg 1100
 ggccagccag gagctgaaa aagcagttag gtcattctgta gaggaagagc 1150
 agtggttaga gttaagcggg tttggggagt aggcttgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgttaag ccaacatccg tctcttgagc 1250
 atgggtttta gaggtcacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttctgggtg ccaactgctct ctttctctct acagctccat 1350
 cttgtttcac ccaccccaca tctcacacat ccagaattcc cttctttact 1400
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<210> 272
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 272
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 Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr
 20 25 30
 Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

35										40					45				
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp					
				50					55					60					
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu					
				65					70					75					
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe					
				80					85					90					
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val					
				95					100					105					
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro					
				110					115					120					
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu					
				125					130					135					
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu					
				140					145					150					
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly					
				155					160					165					
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg					
				170					175					180					
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr					
				185					190					195					
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys					
				200					205					210					
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His					
				215					220					225					
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg					
				230					235					240					
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His					
				245					250					255					
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His					
				260					265					270					
Leu	Gln	His	Val	His	Gln	Asp	Gly	Ala	Gly	Val	Gln	Val	Gln	Ala					
				275					280					285					

<210> 273
 <211> 1158
 <212> DNA
 <213> Homo sapiens

<400> 273
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 ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 ctctggtagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgcctat tcttctctcc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag cccaggaga aatggaggag ctttgtagcc 500
 acctccctgt cagccagtat taacatgtcc ccttccccct gcccgcctg 550
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttccccct 600
 ggcttggcat ccttggtctt ctctgtgtac ccagcaagac gctgtgtcca 650
 gggcagtga gcatctttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgcctga ataatcaagt ggaagggga agcagagggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaaggga agcaacagga acttctgcaa ctggttttta tcggaaagat 850
 catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcaact 1000
 cagcctcccc gtagccatct ccagggtgac ggaacccagt gtattacctg 1050
 ctggaaccaa gaaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgcccatg ccacaaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met	Trp	Leu	Pro	Leu	Gly	Leu	Leu	Ser	Leu	Cys	Leu	Ser	Pro	Leu
1				5					10					15
Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
			20						25					30
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
			35						40					45
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
			50						55					60
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
			65						70					75
Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
			80						85					

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
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 gtcgtggagc caggagcgac gtcaccgccca tggcaggcat caaagctttg 100
 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccctt ccaatataca acaaatactg gccctctttt gttctatttt 200
 ttacatcctt ttcacctatt ccatactgca tagcaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag cttttggact ccctattgta tttgccagag 350
 cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaacacaca 400
 gtcacttttg caactatact aggccttttc ttggtctttg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
 atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550
 gttaatgctg aatggtatag caagcctctt gggggatttt taggtgctcc 600
 cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
 attaaaagga ttttctcttt tgaaaagct tgactgattt cacacttato 700
 tatagtatgc ttttttggtt gtcctgctga atttaaatat ttatgtgttt 750
 ttctgttagt gttgattttt tttggaatca atatgcaatg ttaaacactt 800
 ttttaatgta atcatttgca ttggttagga attcagaatt ccgccggctc 850
 tattactggt caagtacatc ttttctctta aaattattta gcctccatta 900
 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
 cccaatgtta tgcagacata cagacggttg gcatacgtta tagactgtat 1000
 actcagtgca aatatagctg cttttatacc tcagaggggc caagtgttaa 1050
 tgcccatgcc ctccgttaag ggttggttgtt tttactggta gacagatgtt 1100
 ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150
 tctcaattgt tagaagaatt tatgttaaac ttaaggttaa ggggtgtaaaa 1200
 acatttttga gataaggttt ttatttatgt ttattattgt tagagtgagt 1250
 tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300
 ctatttataa gtgaaatttg tgatctccta tcaacctttc atgtttttacc 1350
 ctgttaaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400
 gtttgcatca tatatgccag aaaaccttcc tctgcttctt ccttttgact 1450

tatttggtat gttgtatata ttacataaaa taacttttca aatatagttt 1500
aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550
cattcagagt gccccctccc ctgcaaggcc ttgcoatgat taacaagtaa 1600
cttgtagtgc ttacagataa ttcattgcatt aacagtttta gatttagacc 1650
atggtaatag tagttcttat tctctaaggt tatatcatat gtaattttaa 1700
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gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
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gtttacatct aataattatc aggacttttt tcaggagtgg gttataaaaa 1950
cattcaagtt ggtctgacag tatttttgta aggatatattg tttgtatgtt 2000
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
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tgatgaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276
<211> 131
<212> PRT
<213> Homo sapiens

<400> 276
Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala
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Ile Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr
20 25 30
Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe	110		115		120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp	125		130		

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
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 cacgcgtccg cccacgcgtc cgcccacgcg tccggtgcaa gctcgcgccg 100
 cacactgcct ggtggaggga aggagcccgg gcgcctctcg ccgctccccg 150
 cgccgcgcgtc cgcacctccc caccgcccgc cgcccgcgcg ccgcgcggccg 200
 caaagcatga gtgagcccg ctcctgcagc tgcccggggc gcaaatgga 250
 ggtgttttc cgcgagtaaa aggtggcgcc ggtcagtgtt cgtttccaat 300
 gacggacatt aaccagactg tcagatcctg gggagtgcgc agccccgagt 350
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agagggaag 400
 gaaggcggca ggaaggcgaa gctcgggctc cggcacgtag ttgggaaact 450
 tgcgggtcct agaagtcgcc tccccgcctt gccggccgcc cttgcagccc 500
 cgagccgcag agcaaagtga gacattgtgc gcctgccaga tccgccggcc 550
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 cgggcaccag gctggggtct ccttgtctgt gctctgatat gctccttgac 2400
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 aaccttcagg acagtctatc ttaaatttca tatgagaact ccttctccc 2550

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 ccagaaatta tatctgtttt ggagcaagag tgcataatg tttcagggtg 3950
 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggctg 4000
 atttgggtct gccattgaca gaatgtcaaa taaaaaggaa ttagctagaa 4050
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 gtca 4104

<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg
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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe
			20					25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg
			35					40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu
			50					55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr
			65					70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met
			80					85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val
			95					100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr
			110					115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg
			125					130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu
			140					145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr
			155					160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg
			170					175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr
			185					190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe
			200					205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val
			215					220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys
			230					235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp
			245					250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu
			260					265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser
			275					280					285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
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 ctgcagctct gcgcactgac ccaggcggtc tccaaactct gggtcoccaa 100
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 ccggcggcgc cgttgagttc ccggcggaca agatgggtgc agtcctggtg 200
 caagaaggtc acgccgtctc agacatgctc ctgccgctgg atggggaact 250
 cgtcctggct tcaggagccg gattcggcgt ctcagacgtg ggctcgaccc 300
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 tcctggcatg acccgcacct gtggcgtctt ggggacgagg cacctggcct 400
 cttcttcgtg gacgccgagc gcgtgccctg ccgccacgac gacgtcttct 450
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 gtgcgtgtcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
 ggacctggct gttttcctgg cgtcccgccg gggccgccta cgctccacg 600
 ggccggcgcg gctgagcgtg ggccccgagg actgcgcgga ccgctcgggc 650
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 ccagcccct 709

<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
 Met Gly Val Leu Gly Arg Val Leu Leu Trp Leu Gln Leu Cys Ala
 1 5 10 15
 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe
 20 25 30
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly
 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225

Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
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cttgcaactta tcttctgcat ttgcagctc ttggcattga cgtgttacag 200
cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgcg 250
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
tggacagaag ctggttgaca gttttgtaac tatcttcgaa acctctgtct 350
tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
cctcatgtac ctgtttcctc tctggatgtt gtccactga attcccatga 550
atacaaacct attcagcaac agcaaaaaa aaaaaaaaaa aaaaaaaaaa 600
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
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Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

20

25

30

Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe
35 40 45

Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe
50 55 60

Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys
65 70 75

Leu Ala

<210> 284

<211> 2623

<212> DNA

<213> Homo sapiens

<400> 284

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ctcccggtgc tccaaactaa tacggactga acggatcgct gcgagggttg 150

gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200

ccagatagat tatcttacac tgaactgac aagtactttg aaaatgactt 250

cgaatttat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300

accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350

tggattccgt tgggattact tatataaagt tocaacgccc cattttcatt 400

atattatgaa atattgtgtt cacgtgaagc aagttaacta tgtttttatt 450

acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500

gaatcatggg attgttgcaa atgatatgtt tgatcctatt cggacaacaa 550

ctttctcctt ggatcacatg aatatttatg attccaagtt ttgggaagaa 600

gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgtgac 650

agccatgttg cccggaacag atgtaaaaat acataagcgc tttcctactc 700

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attgttgaat ggtttacgtc aaaagagccc ataatcttg gtctctctca 800

ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtccgc 850

tcatggggcc tgtcatttca gatattgaca agaagttagg atatctcata 900

caaatgctga aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950

aagtgatcat ggaatgacgc agtgctctga ggaaaggtta atagaacttg 1000

accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050

gcagccatct tgccaaaaga aggtaaattt gatgaagtct atgaagcact 1100

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tccacagatt tgtacccact actatgccac ctcctcaata tcactgccat 1400
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atagctcaac cattattaca agcctaattgt tactttgaag tggatttgca 1700
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tagaagcaac caggcacat ctcagcaatg ttttctcttg ttgttaatta 2550
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ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu	1	5	10	15
Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val	20	25	30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	35	40	45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	50	55	60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	65	70	75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	80	85	90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	95	100	105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	110	115	120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	125	130	135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	140	145	150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	155	160	165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	170	175	180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	185	190	195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	200	205	210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	215	220	225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	230	235	240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	245	250	255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	260	265	270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	275	280	285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp				

	290		295		300									
Val	Pro	Glu	Arg	Trp	His	Tyr	Lys	Tyr	Asn	Ser	Arg	Ile	Gln	Pro
				305					310					315
Ile	Ile	Ala	Val	Ala	Asp	Glu	Gly	Trp	His	Ile	Leu	Gln	Asn	Lys
				320					325					330
Ser	Asp	Asp	Phe	Leu	Leu	Gly	Asn	His	Gly	Tyr	Asp	Asn	Ala	Leu
				335					340					345
Ala	Asp	Met	His	Pro	Ile	Phe	Leu	Ala	His	Gly	Pro	Ala	Phe	Arg
				350					355					360
Lys	Asn	Phe	Ser	Lys	Glu	Ala	Met	Asn	Ser	Thr	Asp	Leu	Tyr	Pro
				365					370					375
Leu	Leu	Cys	His	Leu	Leu	Asn	Ile	Thr	Ala	Met	Pro	His	Asn	Gly
				380					385					390
Ser	Phe	Trp	Asn	Val	Gln	Asp	Leu	Leu	Asn	Ser	Ala	Met	Pro	Arg
				395					400					405
Val	Val	Pro	Tyr	Thr	Gln	Ser	Thr	Ile	Leu	Leu	Pro	Gly	Ser	Val
				410					415					420
Lys	Pro	Ala	Glu	Tyr	Asp	Gln	Glu	Gly	Ser	Tyr	Pro	Tyr	Phe	Ile
				425					430					435
Gly	Val	Ser	Leu	Gly	Ser	Ile	Ile	Val	Ile	Val	Phe	Phe	Val	Ile
				440					445					450
Phe	Ile	Lys	His	Leu	Ile	His	Ser	Gln	Ile	Pro	Ala	Leu	Gln	Asp
				455					460					465
Met	His	Ala	Glu	Ile	Ala	Gln	Pro	Leu	Leu	Gln	Ala			
				470					475					

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
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 agggagggtga agaaaccaag acgcagagag gccaaagccc ttgccttgagg 150
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacaggggaca tggccacctg ggacgaaaag gcagtcaccc gcaggggcca 250
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 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350
 gaagaggagg aggaggagga ggagcagcca cccccacac cagtctcagg 400
 cgaggaaggc agagctgcag ccctgacgt tgcccctgcc cctggccccg 450
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tcccacaggt ttcaggtcat catcatctgc ttggtggttc tggatgcct 550
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 agaataacta tgctgocatg gtattccact acatgagcat caccatcttg 650
 gtctttttta tgatggagat catctttaaa ttatttgtct tccgctgag 700
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 ctctcacaca gccaccgtga aagtcctgga gtaaatgtg ctgtgtacag 1100
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 cagagcatct gctgttttc aatcacaaga gaacaaaacc aaaatctata 1250
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 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1337

<210> 287
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 287
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 Ala Pro Ala Glu Arg Met Ser Lys Phe Leu Arg His Phe Thr Val
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 Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp
 35 40 45
 Glu Asn Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
 50 55 60
 Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Ala Pro Asp Val Ala
 65 70 75
 Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
 80 85 90
 Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
 95 100 105
 Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
 110 115 120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala	
				125					130					135	
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe	
				140					145					150	
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser	
				155					160					165	
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val	
				170					175					180	
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe	
				185					190					195	
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala	
				200					205					210	
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu	
				215					220					225	
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala	
				230					235					240	
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp	
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<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

<400> 288
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 cccagaccga gttccagtac tttagatcga aggggctccc tgccgagctg 150
 aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200
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 aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggacg 350
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 tggggaggga aggaaaagg gttggaggcc ttaattatg actgttggga 2350

aaagggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400
 ttccagagga agacgagggg gcaggagctt ggctgactgc tcagagtctg 2450
 ttctgacgcc ctgggggttc ctgtccaacc ccagcagggg cgcagcgggg 2500
 ccagcccccac attccacttg tgtactgct tggaacctat ttttttga 2550
 tttatttgaa cagagttatg tcctaactat ttttatagat ttgtttaatt 2600
 aatagcttgt cattttcaag ttcatttttt attcatattt atgttcatgg 2650
 ttgattgtac cttcccaagc ccgccagtg ggatgggagg aggaggagaa 2700
 ggggggcctt gggccgctgc agtcacatct gtccagagaa attccttttg 2750
 ggactggagg cagaaaagcg gccagaaggc agcagccctg gtccttttc 2800
 tttggcaggt tggggaaggg ctgccccca gccttaggat ttcagggttt 2850
 gactgggggg gtggagagag agggaggaac ctcaataacc tgaagggtgg 2900
 aatccagtta tttctgctgc tgcgagggtt tctttatttc actcttttct 2950
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggcggg 3000
 ggctggagga gaggggtggg ggctggctcc gtcctccca gccttctgct 3050
 gcccttgctt aacaatgocg gccaaactggc gacctcacgg ttgcacttcc 3100
 attccaccag aatgacctga tgaggaaatc ttcaatagga tgcaaatgc 3150
 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcatttaaag cagccttcta 3250
 ataaagtgtt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
 1 5 10 15
 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	
			95						100					105	
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	
			110						115					120	
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	
			125						130					135	
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	
			140						145					150	
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	
			155						160					165	
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	
			170						175					180	
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	
			185						190					195	
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	
			200						205					210	
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	
			215						220					225	
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	
			230						235					240	
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	
			245						250					255	
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	
			260						265					270	
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	
			275						280					285	
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	
			290						295					300	
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	
			305						310					315	
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	
			320						325					330	
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	
			335						340					345	
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	
			350						355					360	
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	
			365						370					375	
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	
			380						385					390	
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	
			395						400					405	

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
			425						430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
			440						445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
			455						460					465

Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
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 ttcccagcc atggcttccc tggggcagat cctcttcttg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcaggga gacactccat cacagtccact actgtgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 tttctgatat cgtgatacaa tggctgaagg aaggtgtttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggcccg acacagctgt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgcggct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca cttctaaagg caagggaat gctaacccttg agtataaaac 500
 tggagccttc agcatgccgg aagtgaatgt ggactataat gccagctcag 550
 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtggtc 600
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650
 cagctttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaaaaatgac 750
 attgccaaag caacagggga tatcaaagt acagaatcgg agatcaaaaag 800
 gcggagtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900
 ctaaaataat gtgcottggc cacaataaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttaccacca gatatgacct agttttatat 1000
 ttctgggagg aaatgaattc atatctagaa gtctggagtg agcaacaag 1050

agcaagaaac aaaaagaagc caaaagcaga aggtccaat atgaacaaga 1100
 taaatctatc ttcaaagaca tattagaagt tgggaaaata attcatgtga 1150
 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200
 gcatccccag atctcagga cctccccctg cctgtcacct ggggagtgag 1250
 aggacaggat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300
 tgtaatgttg ctctgaggaa gcccttgaa agtctatccc aacatatcca 1350
 catottatat tccacaaatt aagctgtagt atgtacccta agacgtgct 1400
 aattgactgc cacttcgcaa ctcagggcg gctgcatttt agtaatgggt 1450
 caaatgattc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500
 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550
 acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600
 ttaacaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile
 1 5 10 15
 Ile Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly
 20 25 30
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

	155		160		165
Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val		
	170		175		180
Trp Ala Ser Gln	Val Asp Gln Gly Ala	Asn Phe Ser Glu Val	Ser		
	185		190		195
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys	Val		
	200		205		210
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser	Cys		
	215		220		225
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys	Val		
	230		235		240
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu	Asn		
	245		250		255
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser	Trp		
	260		265		270
Ala Leu Leu Pro	Leu Ser Pro Tyr Leu	Met Leu Lys			
	275		280		

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 292
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 tgaagcgggc ctccgccggc ctgcagcggg ttcattgagc gacctgggcc 150
 cagcagttgc tacaggagat gaagaccctc ttcttgaata ctgagtacct 200
 gatgcccttt ctctcaacc agtgtggatc ccttctctat tacctcacct 250
 tggcatcgac agatctgacc ctggctgtgc ccatctgtaa ctctctggct 300
 atcatcttca cactgattgt tgggaaggcc cttggagaag atattggtgg 350
 aaaacgtaag ttagactact gcgagtgcgg gacgcagctc tgtggtatctc 400
 gacatacctg tgtagttcc ttccagaac ccatctcccc agagtgggtg 450
 aggacagcgc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500
 ccttgtaggc atcagagttc cttccctctg gacagtctgg agaaagacag 550
 aggctggggg ttgggattga agaccagacc ccatctgagc ccttctctca 600
 gccctgtacc agctcctact ggcatggctg agctcagacc ctctgattt 650
 ctgcctatta tcccaggagc agttgctggc atgggtgctc ccgtgatagg 700
 aatttcactc tgcatacaaa gctcagttag taagaccagc gggcaacagt 750
 ctaccctttg agtgggccga acccacttcc agctctgctg cctccaggaa 800

gcccttgggc catgaagtgc tggcagtgc cggatggacc tagcaacttcc 850
 cctctctggc cttagtcttc tcctctctta tggggataac agctacctca 900
 tggatcacia taagagaaca agagtgaag agttttgtaa ccttcaagtg 950
 ctgttcagct gcggggattt agcacaggag actctacgct caccctcagc 1000
 aacctttctg cccagcagc tctcttctg ctaacatctc aggtctccag 1050
 ccagccacc attactgtgg cctgatctgg actatcatgg tggcaggttc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggctctggg actcagtcag agcgctttgg 1200
 ctgaatgagg ggtggaaccg aggaagaag gtgcgtcggg gtggcagatg 1250
 caggaaatga gctgtctatt agccttgctt gccccacca tgaggtaggc 1300
 agaaatcttc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acactggcg agtagtagct gtcaataaat 1400
 ctatgtaaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala
 1 5 10 15
 Ala Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala
 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe	Pro	Leu	Gln	Leu	Phe	Cys	Phe	Leu	Val	Ala	Ile	Arg	Val	Pro
			155						160					165
Phe	Pro	Trp	Thr	Val	Trp	Arg	Lys	Thr	Glu	Ala	Gly	Val	Trp	Asp
			170						175					180

<210> 294
 <211> 1164
 <212> DNA
 <213> Homo sapiens

<400> 294
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 gctttctctg tggaagatga cagcaattat agcaggaccc tgccaggctg 100
 tcgaaaagat tccgcaataa aactttgcca gtgggaagta cctagtghaa 150
 cggcctaaga tgccacttct tctcatgtcc caggcttgag gcocctgtgt 200
 ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcggt 250
 gctggtatca ctgcagtgtc tgttgacgtc gtagaatctc tgagctgcgt 300
 gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
 gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
 ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
 ctgcagtgtg gagacacaca ttacagcctt cactgtccac gtgtctgtctg 500
 aagaacactt tcattttgta agccagtgtc gccaaaggaa ggaatgcagc 550
 aacaccagcg atgocctgga cctccctctg aagaacgtgt ccagcaacgc 600
 agagtgcctt gcttgttatg aatctaattg aacttctgt cgtgggaagc 650
 cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
 aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750
 cagtaacgcc acctgtcagt tcctgtcttg tgaaaaaag actcttgag 800
 gagtcactt tcgaaagttt gagtgtgcaa atgtaaacag cttaaccccc 850
 acgtctgcac caaccacttc ccacaacgtg ggctccaaag ctctcctcta 900
 cctcttggcc cttgccagcc tccttcttcg gggactgtg ccctgaggtc 950
 ctggggctgc actttgccca gcacccattt tctgcttctc tgaggtccag 1000
 agcaccocct gcggtgtgta caccctcttt cctgtctctg ccccgtttaa 1050
 ctgccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
 ttgttcttca ttattaaagc actggttcat tcactgccaa aaaaaaaaaa 1150
 aaaaaaaaaa aaaa 1164

<210> 295
 <211> 237
 <212> PRT

<213> Homo sapiens

<400> 295

Met	Lys	Gly	Ile	Leu	Val	Ala	Gly	Ile	Thr	Ala	Val	Leu	Val	Ala
1				5					10					15
Ala	Val	Glu	Ser	Leu	Ser	Cys	Val	Gln	Cys	Asn	Ser	Trp	Glu	Lys
				20					25					30
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn
				35					40					45
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro
				50					55					60
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser
				65					70					75
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu
				80					85					90
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys
				95					100					105
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser
				110					115					120
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser
				125					130					135
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Gln	Cys	Val	
				140					145					150
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu
				155					160					165
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe
				170					175					180
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys
				185					190					195
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro
				200					205					210
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu
				215					220					225
Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Leu	Pro			
				230					235					

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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ccagcccat ggtccccgcc gccggcgcg tgctgtgggt cctgctgctg 150

aatctgggtc cccgggcggc gggggcccaa ggctgaccc agactccgac 200
cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300
gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350
gggtgccgag ctcttggccg ccacggtgtc caccggcttt agccggtcgt 400
ccgccattaa cgaggaggat gggctctcag aagaggggggt tgtgattaat 450
gccggaag atagaccag cagagagctt cccagtgcga ctccaatac 500
agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
tcaggctgac ttcaagcctg ccgcgctccc ccgggaggtc tactgaggac 600
ctgccaggct cgcaggccac cctgagccag tggtcacac ctgggtctac 650
cccgagcccg tggccgtcac cctcaccac agccatgcc a tctcctgagg 700
atctcgcgct ggtgctgatg ccctggggcc cgtggcactg ccactgcaa 750
tcgggcacca tgagccggag ccggtctggg aagctgcacg gcctttccg 800
gcgccttca gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
gcacctatca acaatgtccc tgcaaccgac ttcggaaga gtgccccctg 900
gacacaagtc tctgtactga caccaactgt gcctctcaga gcaccaccag 950
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ccagcctgcc acccgccagc ccctgccag ccctggcttt ttgaaacgg 1050
gtcaggattg gcctggagga tatttggaat agcctctctt cagtgtcac 1100
agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
atgaggagat gtcagtatct caacctctct tgcccttca atcctagcac 1200
ccactagata tttttagtac agaaaaacaa aactggaaaa cacia 1245

<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

Met	Val	Pro	Ala	Ala	Gly	Ala	Leu	Leu	Trp	Val	Leu	Leu	Leu	Asn
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Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp

65					70					75				
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
				95					100					105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
				110					115					120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
				125					130					135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu
				140					145					150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu
				155					160					165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser
				170					175					180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser
				185					190					195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His
				200					205					210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys
				215					220					225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln
				230					235					240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys
				245					250					255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr
				260					265					270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr
				275					280					285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu
				290					295					300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val
				305					310					315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe
				320					325					330
Thr	Glu	Met	Gln	Pro	Ile	Asp	Arg	Asn	Gln	Arg				
				335					340					

<210> 298
 <211> 2692
 <212> DNA
 <213> Homo sapiens

<400> 298
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 cgaccgtgag ccggtgtacc gcgactgcgt actgcagtgc gaagagcaga 150
 actgctctgg gggcgctctg aatcacttcc gctcccgcca gccaatctac 200
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 tcggccgtgg cctcgtttct caatggcctg gccagcctgg tgatgctctg 400
 ccgctaccgc accttcgtgc cagcctcctc ccccatgtac cacacctgtg 450
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 cacaccaggg acactgacct cacagagaaa atggactact tctgtgcctc 550
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 ggtcccttc tgttaaccac cccaccctc ctccaggaca ccactagggtg 1450
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 gcttcttttg atactgaaaa cttttaaggt gggagggtgg caaggatgt 2650
 gcttaataaa tcaattccaa gcctcaaaaa aaaaaaaaa aa 2692

<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
 Met Ala Gly Leu Ala Ala Arg Leu Val Leu Leu Ala Gly Ala Ala
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 Ala Leu Ala Ser Gly Ser Gln Gly Asp Arg Glu Pro Val Tyr Arg
 20 25 30
 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
				185					190					195	
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
				305					310					315	
Lys	Phe	Lys	Leu	Asp											
				320											

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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cctctgggca tgctgcttgg gctgtgatg gccgcctgct tcaccttctg 150

cctcagtcacat cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
 gcagcaccaa agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250
 gatgccgaag tcctggaggt gttccacccg acgcatgagt ggcaggccct 300
 tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaatcttc 350
 agactgggga aagagaggca aaactccaat atgaggacaa gttccgaaat 400
 aatttgaaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
 ggatctcaag agtgcaactg caaaattcaa ggagggggca gagatggaga 500
 gttcaaagga agacaaggca aggcaggctg aggtaaagcg gctcttcccg 550
 cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
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 gtccatcaga tggacaatgc gcaggacctg ctttcctttg gtggtcttca 750
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 cgtcaggacc ccagctcgg caggacactg gccagcctgc aggtgagta 1350
 ccagggtgctg gccagcctgg agctgcagga tggtaggac gagggctact 1400
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 aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301
 Met Ala Pro Gln Ser Leu Pro Ser Ser Arg Met Ala Pro Leu Gly
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 Met Leu Leu Gly Leu Leu Met Ala Ala Cys Phe Thr Phe Cys Leu
 20 25 30
 Ser His Gln Asn Leu Lys Glu Phe Ala Leu Thr Asn Pro Glu Lys
 35 40 45
 Ser Ser Thr Lys Glu Thr Glu Arg Lys Glu Thr Lys Ala Glu Glu
 50 55 60
 Glu Leu Asp Ala Glu Val Leu Glu Val Phe His Pro Thr His Glu
 65 70 75
 Trp Gln Ala Leu Gln Pro Gly Gln Ala Val Pro Ala Gly Ser His
 80 85 90
 Val Arg Leu Asn Leu Gln Thr Gly Glu Arg Glu Ala Lys Leu Gln
 95 100 105
 Tyr Glu Asp Lys Phe Arg Asn Asn Leu Lys Gly Lys Arg Leu Asp
 110 115 120
 Ile Asn Thr Asn Thr Tyr Thr Ser Gln Asp Leu Lys Ser Ala Leu
 125 130 135
 Ala Lys Phe Lys Glu Gly Ala Glu Met Glu Ser Ser Lys Glu Asp
 140 145 150
 Lys Ala Arg Gln Ala Glu Val Lys Arg Leu Phe Arg Pro Ile Glu
 155 160 165
 Glu Leu Lys Lys Asp Phe Asp Glu Leu Asn Val Val Ile Glu Thr
 170 175 180
 Asp Met Gln Ile Met Val Arg Leu Ile Asn Lys Phe Asn Ser Ser
 185 190 195
 Ser Ser Ser Leu Glu Glu Lys Ile Ala Leu Phe Asp Leu Glu
 200 205 210
 Tyr Tyr Val His Gln Met Asp Asn Ala Gln Asp Leu Leu Ser Phe
 215 220 225
 Gly Gly Leu Gln Val Val Ile Asn Gly Leu Asn Ser Thr Glu Pro
 230 235 240
 Leu Val Lys Glu Tyr Ala Ala Phe Val Leu Gly Ala Ala Phe Ser
 245 250 255
 Ser Asn Pro Lys Val Gln Val Glu Ala Ile Glu Gly Gly Ala Leu
 260 265 270
 Gln Lys Leu Leu Val Ile Leu Ala Thr Glu Gln Pro Leu Thr Ala
 275 280 285
 Lys Lys Lys Val Leu Phe Ala Leu Cys Ser Leu Leu Arg His Phe

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr	Glu Val Leu Ala Val	
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met Phe	
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu Lys	
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu	Leu Pro Gly Leu Trp Glu	
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His	Leu Leu Ala Leu Pro Glu	
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln	Thr Leu Gly Val Leu Leu	
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly Arg	
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser Leu	
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu Leu	
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu	Leu Arg	
455	460	

<210> 302
 <211> 2136
 <212> DNA
 <213> Homo sapiens

<400> 302
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 tcccatttgc ctgtcctgggt caggccccca ccccccttcc cacctgacca 200
 gccatggggg ctgcggtgtt ttccggctgc actttcgtcg cgttcggccc 250
 ggccttcgcg cttttcttga tcaactgtggc tggggaccgc cttcgcgtta 300
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 gggtagcat cgctgagtga ggacggaaga tcacccatct ccatccgcc 550

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cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750
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ggtggagtgt cccatccttt taatcaagg gattgtgatt ttgactaata 2050
aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
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 1 5 10 15
 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu
 20 25 30
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
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aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100
ccttcggnat catcagtggt gtnttntctg ttatcaatat ttggtctgat 150
gcanttgggc caggtgtggt tgggatccat ggagactcac cctattantt 200
octganttca gcctttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
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ctgcttaaga aggcatga ggggttagca tngctgagtg aggacggaag 150
atcacccatt tccatccgcc agatggccta tgtttntggt ntctccttcg 200
gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
gggccagggtg tgggtgggat ccatggagan tcacctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt tccccccctt 50
tccctttccc cggggtcttg ggtgacattg cacgggcccc tcgtggggtc 100
gogttgccac cccacgcgga ctccccagnt ggngegcctt tccattttgc 150
ctgtctctgt caggccccca ccccccttcc cacntgacca gccatggggg 200
ctgcggtgtt tttcggctgc actttcgtcg cgttcgggcc gccttcgcg 250

cttttcttga tcaactgtgc tggggaccog cttogcgta tcatcctggt 300
 cgcaggggca tttttctggc tggctccct gctcctggcc tctgtggtct 350
 ggttcattctt ggtccatgtg accgacoggt cagatgccc gctccagtac 400
 ggcctcctga tttttggtgc tgcgtctctt gtccttctac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag ggggttagcat 500
 cgctgagtga ggacggaaga tcacccatct ccatccgcc gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg ggcacaggtg ggttgggac catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cnttccccgg ggtctggggg tgacattgca cgcgcccct cgtggggtcg 100
 cgttgccacc ccacgccgac tcccagntg ggcgcccct cccatttgc 150
 tgcctcgttc agggccccc cccccttccc acctgaccag ccatgggggc 200
 tgcggtgttt ttcgggctgc actttcgtcg cgttcgggcc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttgcggtt atcatcctcg 300
 tcgcaggggc atttttctgg ctggtctccc tgctcctggt ctctgtgtgc 350
 tggttcatct tgggtccatg gaccgaccgg tcagatgcc gggtccagta 400
 cggcctcctg atttttgggt ctgctgtctc tgccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggacggaag atcaccatc tccatccgc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctt cctgttatca 600
 atattttggt tgatgcactt gggccaggtg tgggtgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
 gccccaggga gcagtgggtg gttataactc aggcccggtg cccagagccc 50

aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100
 gctgggagca aatccccac cccctacctg ggggacaggg caagtgagac 150
 ctggtgaggg tggctcagca ggcagggaag gagagggtgc tgtgcgtcct 200
 gcaccacat ctttctctgt cccctccttg ccctgtctgg aggtgctgat 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccgat 300
 ggtggcccg ccttgtggtt cctctctacc tggggaata aggtgcagcg 350
 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
 tttcctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500
 ctgggagctg gggccgggga agacgcccg tcggatgaca gcagcagcg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
 cgctgttgc aaggccaac cagctctact gcggggcggg gtgtgtgcac 650
 ccacagtggc tgtcacgcgc cgccactgc aggaagaaag ttttcagagt 700
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
 tgttcaggg ggtcaaacc atccccacc ctggtactc ccaccctggc 800
 cactctaacg acctcatgct catcaaaactg aacagaagaa ttgtccacc 850
 taaagatgto agaccatca acgtctccto tcattgtccc tctgctggga 900
 caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
 ttccctaagg tcttcacagt cttgaatata agcgtgctaa gtcagaaaaag 1000
 gtgcgaggat gcttaccga gacagataga tgacaccatg tctgcgcgcg 1050
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150
 tgcccgccc aacagacggg gtgtctacac gaacctctgc aagtccacca 1200
 agtggatcca ggaaccatc caggccaact cctgagtcac ccaggactc 1250
 agcacaccgg catccccacc tgctgcaggg acagccctga cactcctttc 1300
 agaccctcat tccttcccag agatgttgag aatgttcac tctccagccc 1350
 ctgaccocat gtctcctgga ctcagggtct gcttccccc cattgggctg 1400
 accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450
 gcgggggttg cgtctcaatc tccctggggc actttcatcc tcaagctcag 1500
 ggcocatccc ttctctgcag ctctgaccca aatttagtcc cagaaaaaaa 1550
 ctgagaagtg gaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu	1	5	10	15
Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn	20	25	30	
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly	35	40	45	
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser	50	55	60	
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met	65	70	75	
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln	80	85	90	
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr	95	100	105	
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His	110	115	120	
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln	125	130	135	
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His	140	145	150	
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro	155	160	165	
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser	170	175	180	
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser	185	190	195	
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser	200	205	210	
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile	215	220	225	
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser	230	235	240	
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu	245	250	255	
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn	260	265	270	
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile	275	280	285	
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser											

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
 atggtcaacg accggtggaa gaccatgggc ggcgctgccc aacttgagga 50
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgtgtgt ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgccg ggcacggcgc ccccaacctgt 200
 cgtcagcaact ggggctgcca gcgccaacag cgccctgggtc actgtggaaa 250
 gggcggacag ctcgcacctc agcatcctca ttgaccgcgc ctgccccgac 300
 ctcaccgaca gcttcgcacg cctggagagc gcccaggcct cggtgctgca 350
 ggcgctgaca gagcaccagg cccagccacg gctggtgggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggtggcc 450
 goctcagagc tgacagacga gtgcatgggg ctgcggaagg ggcatggcac 500
 gctggggcag ggcctcagcg ccctgcagag tgagcagggc cgcctcatcc 550

agcttctctc tgagagccag ggccacatgg ctacactggt gaactcogtc 600
 agcgacatcc tggatgccct gcagaggac cgggggctgg gcggccccg 650
 caacaaggcc gaccttcaga gagcgccctgc ccggggaacc cgccccggg 700
 gctgtgccac tggtcccg cccgagact gtctggacgt cctcctaagc 750
 ggacagcagg acgatggcgt ctactctgtc tttccaccc actaccggc 800
 cggcttcag gtgtactgtg acatgcgcac ggacggcggc ggctggacgg 850
 tgtttcagcg ccgggaggac ggctccgtga acttcttcog gggtgggac 900
 gcgtaccgag acggctttgg caggctcacc ggggagcact ggctagggct 950
 caagaggatc cagccctga ccacacaggc tgcctacgag ctgcacgtgg 1000
 acctggagga ctttgagaat ggacggcct atgcccgcta cgggagcttc 1050
 ggcgtagggc tgttctccgt ggacctgag gaagacgggt acccgctcac 1100
 cgtggctgac tattccggca ctgcaggcga ctccctctg aagcacagcg 1150
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 tgtgccgctc tctaccgagg tgcctggtgg taccgcaact gccacacgtc 1250
 caacctcaat gggcagtacc tgcgcggtgc gcacgcctcc tatgccgacg 1300
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 agggagggcg cgggccatcc ctgacacgaa gctccctggg ccggtgaagt 1550
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 tgccctcccc cactgtgact ccggtgctgt ttgccgtccc ctggccagga 1700
 tggtaggagc tgccccaggc accctctgcc ctgcccggcc aaatacccg 1750
 cattatgggg acagagagca gggggcagac agcaccctg gagtctctct 1800
 agcagatcgt ggggaatgtc aggtctctct gaggtcaggt ctgaggccag 1850
 tctctccag ccctcccaat gcccaacccc accccgttcc cctggtgccc 1900
 agagaaccca cctctcccc aagggcctca gcctggctgt gggctgggtg 1950
 gcccatcct accaggccct gaggtcagga tggggagctg ctgcctttgg 2000
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 tgccccgcca ggctgggggt ctgcagtcct cttacctgct gtgccacct 2100
 gctctctgtc tcaaatgagg cccaacccat cccccacca gctcccgcc 2150

gtctctctac ctggggcagc cggggctgcc atcccatttc tctgacctct 2200
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 aggagggcct tgggggtgat gacccttcc ctgaggtggc tgtctccatg 2400
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 ccggcccggc gagtgggtcaa gggacaggga ccacctcacc gggcaaattg 2500
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550
 ttgaatctc ccaacaccca gcacgtgtc atcccactc cttgtgtgca 2600
 cacatgcaga ggtgagacc gcaggctccc aggaccagca gccacaagg 2650
 cagggtgga gccgggtcct cagctgtctg ctcagcagcc ctggacccgc 2700
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 tgggggcctc cgaaaggct ggagtcagcc ttggggagct gcctagcagc 2800
 ctctctcgg gcaggagggg aggtggcttc ctccaaagga caccgatgg 2850
 caggtgccta ggggtgtgg ggttccgttc tcccttccc tccactgaa 2900
 gtttgtgtt aaaaacaat aaatttgact tggcaccact gggggttgt 2950
 gggagaggcc gtgtgacctg gctctctgtc coagtgcac caggtcatcc 3000
 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
 Met Val Asn Asp Trp Lys Thr Met Gly Gly Ala Ala Gln Leu
 1 5 10 15
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu Thr	110	115	120
Glu His Gln Ala Gln	Pro Arg Leu Val	Gly Asp Gln Glu Gln Glu	125	130	135
Leu Leu Asp Thr Leu	Ala Asp Gln Leu	Pro Arg Leu Leu Ala Arg	140	145	150
Ala Ser Glu Leu Gln	Thr Glu Cys Met	Gly Leu Arg Lys Gly His	155	160	165
Gly Thr Leu Gly Gln	Gly Leu Ser Ala	Leu Gln Ser Glu Gln Gly	170	175	180
Arg Leu Ile Gln Leu	Leu Ser Glu Ser	Gln Gly His Met Ala His	185	190	195
Leu Val Asn Ser Val	Ser Asp Ile Leu	Asp Ala Leu Gln Arg Asp	200	205	210
Arg Gly Leu Gly Arg	Pro Arg Asn Lys	Ala Asp Leu Gln Arg Ala	215	220	225
Pro Ala Arg Gly Thr	Arg Pro Arg Gly	Cys Ala Thr Gly Ser Arg	230	235	240
Pro Arg Asp Cys Leu	Asp Val Leu Leu	Ser Gly Gln Gln Asp Asp	245	250	255
Gly Val Tyr Ser Val	Phe Pro Thr His	Tyr Pro Ala Gly Phe Gln	260	265	270
Val Tyr Cys Asp Met	Arg Thr Asp Gly	Gly Gly Trp Thr Val Phe	275	280	285
Gln Arg Arg Glu Asp	Gly Ser Val Asn	Phe Phe Arg Gly Trp Asp	290	295	300
Ala Tyr Arg Asp Gly	Phe Gly Arg Leu	Thr Gly Glu His Trp Leu	305	310	315
Gly Leu Lys Arg Ile	His Ala Leu Thr	Thr Gln Ala Ala Tyr Glu	320	325	330
Leu His Val Asp Leu	Glu Asp Phe Glu	Asn Gly Thr Ala Tyr Ala	335	340	345
Arg Tyr Gly Ser Phe	Gly Val Gly Leu	Phe Ser Val Asp Pro Glu	350	355	360
Glu Asp Gly Tyr Pro	Leu Thr Val Ala	Asp Tyr Ser Gly Thr Ala	365	370	375
Gly Asp Ser Leu Leu	Lys His Ser Gly	Met Arg Phe Thr Thr Lys	380	385	390
Asp Arg Asp Ser Asp	His Ser Glu Asn	Asn Cys Ala Ala Phe Tyr	395	400	405
Arg Gly Ala Trp Trp	Tyr Arg Asn Cys	His Thr Ser Asn Leu Asn	410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
455 460

<210> 315
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 315
cacacgtcca acctcaatgg gcag 24

<210> 316
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 316
gaccagcagg gccaggaca agg 23

<210> 317
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 317
gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318
<211> 1841
<212> DNA
<213> Homo sapiens

<400> 318
gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50
cttttagtgc ctgtcttctt gaactagctc acagtagccc ggcgccocag 100
ggcaatccga ccacatttca ctctcaccgc ttaggaatc cagatgcagg 150
ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250
gcgcacagag cacagggtct cctcttcaac gtggcgacca gtggcctga 300
ccctgctgac ttgtgtcttg gtgctgctga tagggtggc agccctgggg 350
cttttgtttt ttcagtacta ccagctctcc aatactgttc aagacaccat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggtgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
 ttgtacagaa caatggaat ggcatggaga caattgctac cagtctcata 600
 aagacagcaa aagtggggag gactgtaaat atttctgcct tagtgaaaaa 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgcc 750
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 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tggatgaagc agagagcctc 950
 catgtccccc ctgaaacatt aggcgaaggt gactgattcg cctctgcaa 1000
 ctacaaatag cagagtgcgc caggcgggtgc caagcaagg gctagttag 1050
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100
 aaaatgggtt ctgtgtttc ctgttcagga tcaccagcat ttctgagett 1150
 gggtttatgc acgtatttaa cagtcaaacg aagtcttatt tacatgccac 1200
 caaccaacct cagaaccca taatgtcatc tgccttcttg gcttagagat 1250
 aacttttagc tctctttctt ctcaatgtct aatatcact cctgttttc 1300
 atgtcttctt tacactgggt ggaataagaa actttttgaa gttagggaaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400
 ttggcagtea cttccagat tgtaccagca aatacacaag gaattctttt 1450
 tgtttgttcc agttcatact agtcccttcc caatccatca gtaaagacc 1500
 catctgcctt gtccatgccg ttcccaaca gggatgtcac ttgatatgag 1550
 aatctcaaat ctcaatgcct tataagcatt ccttctctgtg tccattaaga 1600
 ctctgataat tgtctccctt ccataggaat ttctcccagg aaagaaatat 1650
 atccccatct cgtttcata tcagaactac cgtcccgat attcccttca 1700
 gagagattaa agaccagaaa aaagtgagcc tcttcatctg cacctgtaat 1750
 agtttcagtt cctattttct tccattgacc catatttata cctttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
1				5					10					15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
ggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250
accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
ttaggaaata cgtccaaga gttgcaattt nttcaagtcc agaataataa 350
gcttgacaga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
ataacaaagc tggagggaact ttgaaggagg gcaaagtntc ctcantact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atgcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgctgacg acttcctgca agc 23

<210> 323
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tetgtttctt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 324
atgctggatg atgatgggga caccaccatg agcctgcatt 40

<210> 325
<211> 2988
<212> DNA
<213> Homo sapiens

<400> 325
gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgcggc tccggggatt cggctcgggc cgctggetct gctctgcggg 100
gagggagcgg gcccgcccgc ggggcccag ccctccggat ccgcccctc 150
cccggtcccg cccctcggga gactcctctg gctgctctgg gggttccgcg 200
ggcgccggga ccgcggtcc gggcgccatg cgggcatcgc tgctgctgtc 250
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ggcgcgccgg cccaactcgg tgcagcccgg agcggagcgc gagaagcccg 450
gggcggcgga aggcgcggg gagaattggg agccgcgcgt cttgccctac 500
caccctgcac agcccggcca ggccgcaaaa aaggccgtca ggaccgccta 550
catcagcacg gagctgggca tcaggcagag gctgctggtg gcggtgtcta 600
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gctccctgcc tttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met Arg Ala Ser Leu Leu Leu Ser Val Leu Arg Pro Ala Gly Pro
1 5 10 15

Val Ala Val Gly Ile Ser Leu Gly Phe Thr Leu Ser Leu Leu Ser
20 25 30

Val Thr Trp Val Glu Glu Pro Cys Gly Pro Gly Pro Pro Gln Pro
35 40 45

Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg
50 55 60

Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly
65 70 75

Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro
80 85 90

Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg
95 100 105

Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu
110 115 120

Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val
125 130 135

Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe
140 145 150

Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Pro Gly Met Ala Val
155 160 165

Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala
170 175 180

Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe
185 190 195

Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala
200 205 210

Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr
215 220 225

Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly
230 235 240

Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu
245 250 255

Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile
260 265 270

Val Ser Ala Arg	Pro Asp Glu Trp Leu	Gly Arg Cys Ile Leu Asp	
	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His Tyr	
	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly Asp	
	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp Pro	
	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu Leu	
	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile Gln	
	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala Trp	
	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe Glu	
	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser Cys	
	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg Ala	
	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn Arg	
	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val Asn	
	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr Leu	
	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg Pro	
	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val Glu	
	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr Val	
	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly Phe	
	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala Ala	
	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr	Glu Pro Arg Gln Ala Gln	
	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His Val	
	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp Leu	
	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
	770	775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcatgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgcaactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
gcctcctctg attggcaagc gctggccacc tccccacacc ctttgccaac 100
gctcccctag tggagaaaag gagtagctat tagccaattc ggcaggggccc 150
gctttttaga agcttgattt cctttgaaga tgaaagacta gcggaagctc 200
tgctcttttc cccagtgggc gagggaactc ggggogattg gctgggaact 250
gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300
ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 cggccctga gaccctgcag caccatctgt catggcggct gggctgtttg 550
 gtttgagcgc tcgcgtctt ttggcggcag cggcgacgcg agggctcccg 600
 gccgcccgcg tcgcgtggga atctagcttc tcaggactg tggtcgcccc 650
 gtcgcgtgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa ccagactcc 750
 catggttatg acaaggacc cgttttggac gtctggaaca tgcgacttgt 800
 cttctctttt ggctgtcca tcactctggt ccttggcagc accttctgtg 850
 cctatctgcc tgactacagg atgaaagagt ggtccgcgcg cgaagctgag 900
 aggcctgtga aataccgaga ggccaatgc cttcccatca tggaaatcaa 950
 ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
 ctaagtgggg ctcaagaagc accgccttcc caccacctg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
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Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
			20						25					30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35						40					45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50					55					60
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
			65						70					75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
			80						85					90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
			95						100					105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
			110						115					120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
			125						130					135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
			140						145					150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgttttggt tgagcgctcg ccgtcttttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgctcc gctgggaatc tagctttccc 100
aggactgttg tcgccccgtc cgctgtggcg ggaagcggc cccagaaacc 150
gaccacaccg tggcaagagg acccagaacc caggagacgaa aacttgtatg 200
agaagaaccc agactcccat ggttatgaca aggaccccg tttggacgtc 250
tggaacatgc gacttgtctt cttctttggc gtctccatca tcttggtcct 300
tggcagcacc tttgtggcct atotgcctga ctacaggatg aaagagtggg 350
ccgcccgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagcaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctocaggact gtggctgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggtta tggcgcttgc tctgctogto ctgttgetcc tggggcccg 50
cggctggtgc cttgcagaac ccccacgcga cagcctgogg gaggaacttg 100
tcacaccccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200
ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgcacctgtc attcacacaa ggcttttgga ggacccgata ctggggggcca 300
cccttctctg agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttgaa ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
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ggccacctct atattgaggt gctcaataag caaaagtgt cggtggtgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaagtga tggggtgtgc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
aaaaaaaa aa 2162

<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Gly Pro Gly Gly
1 5 10 15
Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr Glu	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys Ala	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr Ser	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn Ala	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser Val	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp Ser	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro Leu	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro Ser	455	460	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val	
				470					475					480	
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser	
				485					490					495	
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu	
				500					505					510	
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile	
				515					520					525	
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr	
				530					535					540	
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly	
				545					550					555	
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly	
				560					565					570	

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggtcct catggtgtct ctcggttcttg 50
 tgaccttggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttgcccag ctgacaacgt acgctgcttc aagtccgac ctccccagtg 150
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200
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 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
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 <213> Homo sapiens

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 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
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 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
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 Thr Arg Cys Pro Gln Lys
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<213> Homo sapiens

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<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

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Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
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Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
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Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile
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Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr					
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Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn					
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Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln					
				110					115					120					
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn					
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Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg					
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Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln					
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Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val					
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Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu					
				185					190					195					
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val					
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Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro					
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Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe					
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Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn					
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Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe					
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Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile					
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Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn					
				290					295					300					
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp					
				305					310					315					
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu					
				320					325					330					
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val					
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Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu					
				350					355					360					
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn					
				365					370					375					
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe					

380										385					390				
Arg	Leu	Ser	Gly	Ala	Leu	Ile	Lys	Gly	Tyr	Glu	Gln	Asp	Val	Gly					
				395					400					405					
Thr	Arg	Thr	Ser	Phe	Tyr	Gly	Phe	Thr	Ala	Phe	Ser	Leu	Thr	Gln					
				410					415					420					
Ser	Leu	Leu	Ile	Leu	Gly	Asn	Arg	Gly	Phe	Lys	Asn	Val	Pro	Leu					
				425					430					435					
Gly	Lys	Asp	Val	Arg	Tyr	Leu	His	Phe	Leu	Glu	Gly	Thr	Arg	Asp					
				440					445					450					
Tyr	Glu	Trp	Leu	Glu	Ala	Leu	Leu	Met	Asn	Gln	Thr	Val	Met	Ser					
				455					460					465					
Lys	Asn	Leu	Phe	Trp	Phe	Arg	His	Arg	Pro	Gln	Glu	Ala	Phe	Arg					
				470					475					480					
Glu	Ala	Leu	His	Met	Asp	Arg	Tyr	Leu	Leu	Leu	His	Pro	Asp	Phe					
				485					490					495					
Leu	Arg	Tyr	Met	Lys	Asn	Arg	Phe	Leu	Arg	Ser	Lys	Thr	Leu	Asp					
				500					505					510					
Gly	Ala	His	Trp	Arg	Ile	Tyr	Arg	Pro	Thr	Thr	Gly	Ala	Leu	Leu					
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Leu	Leu	Thr	Ala	Leu	Gln	Leu	Cys	Asp	Gln	Val	Ser	Ala	Tyr	Gly					
				530					535					540					
Phe	Ile	Thr	Glu	Gly	His	Glu	Arg	Phe	Ser	Asp	His	Tyr	Tyr	Asp					
				545					550					555					
Thr	Ser	Trp	Lys	Arg	Leu	Ile	Phe	Tyr	Ile	Asn	His	Asp	Phe	Lys					
				560					565					570					
Leu	Glu	Arg	Glu	Val	Trp	Lys	Arg	Leu	His	Asp	Glu	Gly	Ile	Ile					
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 <212> DNA
 <213> Homo sapiens

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ctttatacac atcccccat ggacaagaga tttatttttg cagacagact 400
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 <211> 91
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
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 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

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 Asn Cys Glu Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
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 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
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Gly Ala

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 <211> 3226
 <212> DNA
 <213> Homo sapiens

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 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
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 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

215										220										225									
Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val															
				230					235					240															
Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu															
				245					250					255															
Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr															
				260					265					270															
Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala															
				275					280					285															
Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro															
				290					295					300															
Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln															
				305					310					315															
Ser	Gly	Ala	Met	Glu	Asn	Trp	Gly	Leu	Thr	Thr	Tyr	Arg	Glu	Ser															
				320					325					330															
Ala	Leu	Leu	Phe	Asp	Ala	Glu	Lys	Ser	Ser	Ala	Ser	Ser	Lys	Leu															
				335					340					345															
Gly	Ile	Thr	Val	Thr	Val	Ala	His	Glu	Leu	Ala	His	Gln	Trp	Phe															
				350					355					360															
Gly	Asn	Leu	Val	Thr	Met	Glu	Trp	Trp	Asn	Asp	Leu	Trp	Leu	Asn															
				365					370					375															
Glu	Gly	Phe	Ala	Lys	Phe	Met	Glu	Phe	Val	Ser	Val	Ser	Val	Thr															
				380					385					390															
His	Pro	Glu	Leu	Lys	Val	Gly	Asp	Tyr	Phe	Phe	Gly	Lys	Cys	Phe															
				395					400					405															
Asp	Ala	Met	Glu	Val	Asp	Ala	Leu	Asn	Ser	Ser	His	Pro	Val	Ser															
				410					415					420															
Thr	Pro	Val	Glu	Asn	Pro	Ala	Gln	Ile	Arg	Glu	Met	Phe	Asp	Asp															
				425					430					435															
Val	Ser	Tyr	Asp	Lys	Gly	Ala	Cys	Ile	Leu	Asn	Met	Leu	Arg	Glu															
				440					445					450															
Tyr	Leu	Ser	Ala	Asp	Ala	Phe	Lys	Ser	Gly	Ile	Val	Gln	Tyr	Leu															
				455					460					465															
Gln	Lys	His	Ser	Tyr	Lys	Asn	Thr	Lys	Asn	Glu	Asp	Leu	Trp	Asp															
				470					475					480															
Ser	Met	Ala	Ser	Ile	Cys	Pro	Thr	Asp	Gly	Val	Lys	Gly	Met	Asp															
				485					490					495															
Gly	Phe	Cys	Ser	Arg	Ser	Gln	His	Ser	Ser	Ser	Ser	Ser	His	Trp															
				500					505					510															
His	Gln	Glu	Gly	Val	Asp	Val	Lys	Thr	Met	Met	Asn	Thr	Trp	Thr															
				515					520					525															
Leu	Gln	Arg	Gly	Phe	Pro	Leu	Ile	Thr	Ile	Thr	Val	Arg	Gly	Arg															

530					535					540				
Asn	Val	His	Met	Lys	Gln	Glu	His	Tyr	Met	Lys	Gly	Ser	Asp	Gly
				545					550					555
Ala	Pro	Asp	Thr	Gly	Tyr	Leu	Trp	His	Val	Pro	Leu	Thr	Phe	Ile
				560					565					570
Thr	Ser	Lys	Ser	Asn	Met	Val	His	Arg	Phe	Leu	Leu	Lys	Thr	Lys
				575					580					585
Thr	Asp	Val	Leu	Ile	Leu	Pro	Glu	Glu	Val	Glu	Trp	Ile	Lys	Phe
				590					595					600
Asn	Val	Gly	Met	Asn	Gly	Tyr	Tyr	Ile	Val	His	Tyr	Glu	Asp	Asp
				605					610					615
Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala
				620					625					630
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln
				635					640					645
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu
				650					655					660
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln
				665					670					675
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg
				680					685					690
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg
				695					700					705
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly
				710					715					720
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala
				725					730					735
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr
				740					745					750
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val
				755					760					765
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu
				770					775					780
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser
				785					790					795
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn
				800					805					810
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp
				815					820					825
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly
				830					835					840
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
	920		925		930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935		940		

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
 cagccacaga cgggtcatga gcgcggtatt actgctggcc ctctgggggt 50
 tcctcctccc actgccagga gtgcaggcgc tgctctgccca gtttgggaca 100
 gttcagcatg tgttgaaggt gtccgacctc ccccggaat ggacccctaa 150
 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgtcta 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaaaggacc aggagccccg cgtcactgag caccggatgg gccccggcct 300
 ctccctgata tctacacct tcgtgtgcgc ccaggaggac ttctgcaaca 350
 acctcgtaa ctccctccc ctttggggcc cacagcccc agcagaccca 400
 ggatccttga ggtgccagct ctgcttgtct atggaaggct gtctggaggg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tcctcaggct caggggagga ggcattctct ccaatctgag agtccaggga 550
 tgcctgcccc agccagggtg caacctgctc aatgggacac aggaatttgg 600
 gcccggtggg atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcgggggac caccattatg acacacggaa acttggtctc agaaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactgtt ggggtcaaaa attccagaa gaccaccatc 850
 cactcagccc ctctcggggt gcttgtggcc tcctataccc acttctgtct 900
 ctcggaacctg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950

tccctcctca agctgccct gtcccaggag accggcagtg tctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgcc 1050
 cagggggcgcc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcagggtc gcgtaggcca acctccagc 1150
 ttcttggtga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctcctg cctctcagca tgaggagggt ggggctgagg 1250
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgctg 1300
 tggtagggag tgggttgccc ttcctgctaa ctctattacc cccacgattc 1350
 ttcaccgtg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcctggagca tccggacttg ccctatggga gaggggacgc tggaggagtg 1550
 gctgcagtga tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Ala	Leu	Gly	Phe	Ile	Leu	Pro
1				5				10				15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr
				20					25			30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr
				35					40			45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr
				50					55			60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser
				65					70			75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu
				80					85			90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val
				95					100			105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro
				110					115			120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys
				125					130			135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu
				140					145			150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu
											Arg	Leu

155	160	165
Arg Gly Gly Gly Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met	
170	175	180
Pro Gln Pro Gly Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile Gly	
185	190	195
Pro Val Gly Met Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu Thr	
200	205	210
Cys His Arg Gly Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln	
215	220	225
Glu Pro Thr Asp Trp Thr Thr Ser Asn Thr	Glu Met Cys Glu Val	
230	235	240
Gly Gln Val Cys Gln Glu Thr Leu Leu Leu	Ile Asp Val Gly Leu	
245	250	255
Thr Ser Thr Leu Val Gly Thr Lys Gly Cys	Ser Thr Val Gly Ala	
260	265	270
Gln Asn Ser Gln Lys Thr Thr Ile His Ser	Ala Pro Pro Gly Val	
275	280	285
Leu Val Ala Ser Tyr Thr His Phe Cys Ser	Ser Asp Leu Cys Asn	
290	295	300
Ser Ala Ser Ser Ser Ser Val Leu Leu Asn	Ser Leu Pro Pro Gln	
305	310	315
Ala Ala Pro Val Pro Gly Asp Arg Gln Cys	Pro Thr Cys Val Gln	
320	325	330
Pro Leu Gly Thr Cys Ser Ser Gly Ser Pro	Arg Met Thr Cys Pro	
335	340	345
Arg Gly Ala Thr His Cys Tyr Asp Gly Tyr	Ile His Leu Ser Gly	
350	355	360
Gly Gly Leu Ser Thr Lys Met Ser Ile Gln	Gly Cys Val Ala Gln	
365	370	375
Pro Ser Ser Phe Leu Leu Asn His Thr Arg	Gln Ile Gly Ile Phe	
380	385	390
Ser Ala Arg Glu Lys Arg Asp Val Gln Pro	Pro Ala Ser Gln His	
395	400	405
Glu Gly Gly Gly Ala Glu Gly Leu Glu Ser	Leu Thr Trp Gly Val	
410	415	420
Gly Leu Ala Leu Ala Pro Ala Leu Trp Trp	Gly Val Val Cys Pro	
425	430	435
Ser Cys		

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 356
 gcgacgggca ggacgccccg ttgcgcctagc gcgtgctcag gagttgggtg 50
 cctgcctgcg ctcaggatga gggggaatct ggccttggtg ggcgttctaa 100
 tcagcctggc ctctcctgta ctgctgccat ctggacatcc tcagccggct 150
 ggcatgacg cctgctctgt gcagatcctc gtccttgggc tcaaagggga 200
 tgcgggagag aaggagagaca aaggcgcccc cggacggcct ggaagagtcg 250
 gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300
 gtgggtcgtc atggaaaaat tgggtccatt ggctctaaag gtgagaaagg 350
 agattccggt gacataggac cccctggtec taatggagaa ccaggcctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550
 gctacgcgga cgcccagctg tcctgccagg gccgcggggg cagctgagc 600
 atgcccagg acgaggctgc caatggcctg atggccgcat acctggcgca 650
 agccggcctg gcccggtgtc tcatcggcat caacgacctg gagaaggagg 700
 gcgccttcgt gtactctgac cactcccca tgcggaacct caacaagtgg 750
 cgcagcgggt agcccaacaa tgcctacgac gaggaggact gcgtggagat 800
 ggtggcctcg ggcggtctga acgacgtggc ctgccacacc acctgtact 850
 tcattgttga gtttgacaag gagaacatgt gagcctcagg ctggggctgc 900
 ccattggggg ccccatatgt cctgcaggg ttggcaggga cagagccag 950
 acctgggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
 tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050
 aaaatgaaag ttttctggg gtgctgtctc tgaagaagca gagtttcatt 1100
 acctgtattg tagcccaat gtcattatgt aattattacc cagaattgct 1150
 cttccataaa gcttgtgcct ttgtccaagc tatacaataa aatctttaag 1200
 tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1 5 10 15
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp		35	40	45
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg		50	55	60
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln		65	70	75
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser		80	85	90
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro		95	100	105
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys		110	115	120
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu		125	130	135
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu		140	145	150
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp		155	160	165
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro		170	175	180
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln		185	190	195
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys		200	205	210
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe		215	220	225
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu		230	235	240
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala		245	250	255
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn		260	265	270

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

agtgactgca gccttcotag atccctccca ctcggtttct ctctttgcag 50

gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100

gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gtctgtaagg agccacagga ggagggtggt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctccga gaaacgtgac 400
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 gggaaagaca ggacctttct taccttcagt gagggttcct cggccccttc 500
 atcccaatca gcttggatcc acaggaaagt cttccctggg aacagaggag 550
 cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atcctcaagt atcccccgag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 cagggtgcga cgcctctgtt accctttctc ttcctgttc ttgtaacatt 750
 cttgtgcttt gactccttct ccacttttct tacctgaccc tgggtgtgaa 800
 actgcatagt gaatatcccc aaccccaatg ggcatgact gtagaatacc 850
 ctagagtcc tgtagtgcc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 359
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
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 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
 20 25 30
 Val Pro Gly Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
 35 40 45
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
 50 55 60
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
 65 70 75
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
 80 85 90
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
 95 100 105
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
 110 115 120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
 125 130 135

<210> 360
 <211> 1738
 <212> DNA
 <213> Homo sapiens

<400> 360
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 gcctgctgtg ccgcgcgtgt cgcgcgtgct accgcgtctg ctggacgcgg 100
 gagacgccag cgagctgggt attggagccc tgcggagagc tcaagcgccc 150
 agctctgccc caggagccca ggctgcccog tgagtcccat agttgtgtgca 200
 ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250
 ctgttcctgg tctgcggatc ccaaggctac ctccctgccca acgtactct 300
 cttagaggag ctgctcagca aataccagca caacgagtct cactccggg 350
 tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
 aacaagcttc ggggcccagg gcagcctcag gcctccaaca tggagtacat 450
 ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500
 gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
 tgtgatggct ggctcagggt ctccctctggc aggggaggat cccggctctg 600
 ttctgttttg ttgttttgt ttgagacagg gtctcactct gccactgaog 650
 ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactccggg 700
 gttaagcgat cctgcttcag cctcccaagt agctggaat acaggcatgc 750
 accatggtgc ccagctagat tttaaatatt ttgtggagat gggggtcttg 800
 ctacgttgcc caggctggto ttgaactcct aggtcacaag aatcctcctg 850
 cctcagcctc tcaaagtgtc aggattatag gcatgagtca ccctgtctgg 900
 ctctggctct gttcttaaca ttctgcaaaa acaacacagc tgggttccct 950
 gtgcagagcc tgccctgttg ccttcattgc actcttggtg gctccactgg 1000
 gaacacagct ctccagcctt cccacctgga ggcagagtgg ggaggggccc 1050
 agggctgggc ttgtctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
 accaccctga cttctcctta gcccggtgta gcctcacttt cacttgagg 1150
 agtccttctc cgcgtggttg ccatgactgt gagataagtc gaggtgtgta 1200
 agggcccgcc acagactgac ctgcctcccc aacctctagg ctttgctaac 1250
 cgggaaagga gctaacggtg acagaagaca gccaaagtoa accctcccg 1300
 gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa cttccttcct ggctgggttt ccagaactac 1400
 agaggaatgg accacagtct tccaggggcc ctctcgtgcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggcgttt taaacaaacc 1500
 cacgtcccag cctgggtaac atggtaaagc cccgtctcta caaaaaaac 1550
 caagttagcc gggcatgggt gtgcgcacct gtagtcccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtgag ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
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 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatccca ggagcgcagt 50

ggccactatg gggctcgggc tgccocctgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggc cgggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctctatgag tccagcttcc tggaattgct 200
tgaaaaagctc tgctctctcc tccatctccc ttcagggaac agcgtcacc 250
tccaccatgc aagatctcaa caccatgttg tctgcaaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggocgg ggatgcagga 350
ggcaggcccc gacctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
aattgtatct gtgtaatgtt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaaga actcttttaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatatttacc 200
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttccoctccc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350
aaaaggcatg tatttaaaatc tgtatgattc tcaaccatct ttagttggga 400
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttggt acgctagtaa 500
aatagaaaacc tgtgtttatt ctcagggtatt ttagaaacaa cagccatcat 550
tttattttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600
gctatcaaat attacttcat tcaatataaa taacaatagt agaagttggt 650
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750
gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800
accagaataa aagttcatat ctacco 826

<210> 365
<211> 67
<212> PRT
<213> Homo sapiens

<400> 365
Met Ile Gly Tyr Tyr Leu Ile Leu Phe Leu Met Trp Gly Ser Ser
1 5 10 15
Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
20 25 30
Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
35 40 45
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
50 55 60
Leu Pro Ser Asp Cys Ser Lys
65

<210> 366
<211> 2475
<212> DNA
<213> Homo sapiens

<400> 366
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tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100
ttttgcagga tgatgggtggc ccttcgagga gcttctgcat tgctggttct 150
gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200
tggtgcatta catctaccag cgctttcgag tcttgagca agggctggaa 250
aatgtatccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300
aaaaatatata tctgtcatgc tgggaagatg tcagacctac acaagtgtgt 350
acaagatgac agtgggtaac ttggcactga gagttgaacg tgcccaacgg 400
gagattgact acatacaata ccttcgagag gctgacgagt gcatcgtatc 450
agaggacaag acactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
 ataaagtctt tgaaaaatgt gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccgaaaacaa cactgtttgg gaatttgcaa acatacgggc attcatggag 700
 gataaacacca agccagctcc ccggaagcaa atcctaacac ttctctggca 750
 gggaacaggc caagtgatct acaaaggttt tctatttttt cataaccaag 800
 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgctcccagg aggggtaggc cgagcattgg ttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccactc tgggccaggc acccatagcc atttggttct cacaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
 ccaggatgct gaagcctcat tcctcttggtg tggggttctc tatgtggtct 1100
 acagtactgg gggccagggc cctcatcgca tcacctgcat ctatgatcca 1150
 ctgggcacta tcagttagga ggacttgccc aacttggtct tccccaaag 1200
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
 atgcctggaa tgaaggaaac cagatcattt acaaaactca gacaagaga 1300
 aagctgcctc tgaagtaatg cattacagct gtgagaaaga gcactgtggc 1350
 tttggcagct gttctacagg acagttaggc tatagccctc tcacaatata 1400
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgt 1450
 tgctctcttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcatcaggaa agtttcaaca atgtccatta ctcccccaa 1550
 cctcctggct ctcaaggatg accacattct gatacagcct actcaagcc 1600
 ttttgtttta ctgctcccca gcatttactg taactctgcc atcttccctc 1650
 ccacaattag agttgtatgc cagcccctaa tattcaccac tggctttttc 1700
 ctccccctggc ctttgctgaa gctcttccct ctttttcaaa tgtctattga 1750
 tattctccca ttttactgc ccaactaaaa tactattaat atttctttct 1800
 tttcttttct ttttttgag acaaggctct actatgttgc ccaggctggt 1850
 ctcaaaactcc agagctcaag agatcctcct gcctcagcct cctaagtacc 1900
 tgggattaca ggcatgtgcc accacacctg gcttaaaata ctattttotta 1950
 ttgagggtta acctctattt cccctagccc tgtccttcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaaca 2100

tgcacaagtc tttagagctg tcattctaga gtttagtgta gtaacacaat 2150
 taaaaagtga aagatacagc tagaaaaaac taaaatccc atagtttttc 2200
 cattgcccac ggaagcatca aatacgtatg tttgttcacc tactottata 2250
 gtcaatgcgt tcatcgtttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta aggggtgagga ccccaactct agcctcctct 2400
 tgtcttgctg tcctctgttt ctctctttct gctttaaatt caataaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu	215	220	225
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn	230	235	240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly	245	250	255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile	260	265	270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly	275	280	285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly	290	295	300
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln	305	310	315
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val	320	325	330
Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr	335	340	345
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe	350	355	360
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro	365	370	375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile	380	385	390
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys				395	400	

<210> 368
 <211> 2281
 <212> DNA
 <213> Homo sapiens

<400> 368
 gggcgccgc gtactcacta gctgaggtgg cagtggttcc accaactatg 50
 agctctcgca gatgtcggag ctcatggggc tgcggtgtt gcttgggetg 100
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc cgcctgccca aaaagcaaat ggatttccac 200
 ctgacaaatc ttcggtatcc aagaagcaga aacaatatca gcggattcgg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggctgcagc 300
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaatacct ggctacctgt gcagatgata gcaccatccg catctggagc 400
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag ccctgactgc agagccttca 500
 tctgtctggct ggccaacggg gacacccctcc gtgtcttcaa gatgaccaag 550
 cgggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600
 aaagcacaag gcgcctgtca tgcacattgg cattgtctaac acagggaagt 650
 ttatcatgac tgcctccagt gacaccactg tctcatctg gagcctgaag 700
 ggtcaagtc tgtctacat caacaccaac cagatgaaca acacacacgc 750
 tgctgtatct ccctgtggca gatttgtagc ctctgtgtgc ttcaccccag 800
 atgtgaaggt ttgggaagtc tgctttggaa agaaggggga gttccaggag 850
 gtggtgcgag ccttcgaact aaagggccac tccgcggctg tgcaactcgt 900
 tgctttctcc aacgactcac ggaggatggc ttctgtctcc aaggatgcta 950
 catggaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
 tacttctga agacaggccg ctttgaagag gcggcgggtg ccgcgccgtg 1050
 ccgcctggcc ctctccccc acgcccagggt cttggccttg gccagtggca 1100
 gtagtattca tctctacaat acccgcgagg gcgagaagga ggagtgtctt 1150
 gagcgggtcc atggcgagt tatcgccaac ttgtcctttg acatcaactg 1200
 ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttcacaaca 1250
 ctctcggcca ccgagccatg gtggaggaga tgcaggcca cctgaacggg 1300
 gcctccaacg agagcacccg ccagaggctg cagcagcagc tgaccaggcg 1350
 ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400
 gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450
 ctgccatctt tctccccagg tggaagcctt tcagaaggag tctcctgggt 1500
 ttcttactgg tggccctgct tcttccatt gaaactactc ttgtctactt 1550
 aggtctctct ctcttctgtg gctgtgactc ctccctgact agtggccaag 1600
 gtgcttttct tctccccagg ccagtggggt ggaatctgtc cccacctggc 1650
 actgaggaga atggtagaga ggagaggaga gagagagaga atgtgatatt 1700
 tggccttgtg gcagcacatc ctcacacca aagaagtttg taaatgttcc 1750
 agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
 ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
 ctaagggatt tccttctggg cctcagttct atttgtaaga tggagaataa 1900
 tcctctctgt gaactccttg caaagatgat atgaggctaa gagaatatca 1950
 agtccccagg tctggaagaa aagtagaaaa gagtagtact attgtccaat 2000
 gtcatgaaa tggtaaaagt ggaaccagt gtgctttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
tatatgggtg ggactttctc cttcgggaga tgatatcttg ttaaaggaga 2150
cctotttttca gttcatcaag ttcacagat atttgagtgc ccactctgtg 2200
cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu	1	5	10	15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly	20	25	30	
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln	35	40	45	
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys	50	55	60	
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His	65	70	75	
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser	80	85	90	
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu	95	100	105	
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys	110	115	120	
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu	125	130	135	
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala	140	145	150	
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys	155	160	165	
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro	170	175	180	
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly	185	190	195	
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr	200	205	210	
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	215	220	225	
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	230	235	240	

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370

<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50

catctaagca ggcagtgttt tgccttcacc ccaagtgacc atgagagggtg 100

ccacgcgagt ctcaatcatg ctccctctag taactgtgtc tgactgtgct 150

gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200

ctgtgccatc agcctgtggc ttcgagggtc gcggatgtgc accccgctgg 250

ggcggaagcg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300

aggaaacgca agcaccacac ctgtccttgc ttgcccaacc tgetgtgtgc 350

caggttcccg gacggcaggt accgctgtgc catggacttg aagaacatca 400

atttttaggc gcttgctgg tctcaggata cccaccatcc ttttctgag 450
 cacagcctgg atttttattt ctgccatgaa acccagctcc catgactctc 500
 ccagtcctta cactgactac cctgatctct cttgtctagt acgcacatat 550
 gcacacaggc agacatacct cccatcatga catggtcccc aggctggcct 600
 gaggatgtca cagcttgagg ctgtggtgtg aaagggtggc agcctggctc 650
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 cccctcccc tcccaggtg acctgctctc tttctgggc cctgcccctc 750
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 tggttaactc cttagtttca gaccacagac tcaagattgg ctcttccag 950
 agggcagcag acagtcacct caaggcaggt gtagggagcc cagggaggcc 1000
 aatcagcccc ctgaagactc tggctccagt cagcctgtgg cttgtggcct 1050
 gtgacctgtg accttctgcc agaattgtca tgcctctgag gcccctctt 1100
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
 cattaatatg caaatggtgg tggttcaatc taatctgata ttgacatat 1200
 agaagcaat taggggtttt ccttaacaa ctcctttcca aggatcagcc 1250
 ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300
 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
 tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaa 1400
 caccaactga aaaaa 1415

<210> 371
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 371
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr
 1 5 10 15
 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
 20 25 30
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
 agcgcccggg cgtcggggcg gtaaaaggcc ggcagaaggg aggcacttga 50
 gaaatgtctt tctccagga cccaagtctt ttcacatgg g gatgtggtc 100
 cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagcccaga aagcgccctt ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctcoctgaaa 350
 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttcagcc ttatttcaaa ggagaaatct 450
 tcttgatga aaagaaaaag ttctatggtc cacaaggcgg gaagatgatg 500
 tttatgggat ttatccgtct gggagtgtgg tacaacttot tccgagcctg 550
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
 gaggtttctg ggtgggatca ggaagcagg gcattcttct tgagcaccga 650
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaagctgc 700
 taagatgata aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
 aaactgccc gctcagggat aaccaggac attcacctgt gttcatggga 800
 tgtattgttt cactcgtgt ccctaaggag tgagaaacc atttatactc 850
 tactctcagt atggattatt aatgtatttt aatattctgt ttaggccac 900
 taaggcaaaa tagcccaaaa acaagactga caaaaatctg aaaaactaat 950
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
 caggctgggt gcagtggctc acacctgtaa tccagcact ttgggaggcc 1050
 aaggtgagca agtcacttga ggtcgggagt tegagaccag cctgagcaac 1100
 atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtggt 1150
 ggcaggcacc ttagtgccca gctacccggg aggctgaggc aggagaatca 1200
 cttgaacctg ggaggtggag gttgcggtga gctgagatca caccactgta 1250
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
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 1 5 10 15
 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Ala Leu Ala Leu Leu
 20 25 30
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
 95 100 105
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
 200 205 210
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
 acggaccgag gggttcgaggg agggacacgg accaggaacc tgagctaggt 50
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gcggtaggag gggcgagcgc gagaagcccc ttctcggcg ctgccaaccc 150
gccaccacgc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccacttctgc aaatgagaat agcactgttt tgccttcac caccagctcc 300
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcactgtggt 350
cttctccctc ttggtgcct tgcctctggc tgtggggctg gcactgttgg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccac ctaggcccc tctcctgcat 550
ctgtctccct tcattgtgt gtgaccttg ggaaggcag tgccctctct 600
gggcagtcat atccaccag tgcttaatag cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met	Ala	Asn	Pro	Gly	Leu	Gly	Leu	Leu	Ala	Leu	Gly	Leu	Pro
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Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln
				20					25				30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr
				35					40				45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala
				50					55				60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val
				65					70				75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr
				80					85				90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala
				95					100				105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly
				110					115				120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376
aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50
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ttctgtcac tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaatggcta ctttctatca agaaataaag 200
agaaccacag tcaaccaca caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaggggc atagttaaag gacggaatct 300
tgactcaaga gggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttaaggcaa atacacatat 400
tagtattacc ttagtgaat gtatccctgt catatataca ataagggtgaa 450
attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgatata gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaagg aaagaaggga aatgttgcc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
 tgaataataa tggcctttgaa gatattgtca ttgttataga tcctagtgtg 150
 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
 agaaaaggcg atacattcac ttcacccctg accttctact tggaaaaaaa 450
 caaaatgaat atggaccacc aggcaaaactg tttgtccatg agtgggctca 500
 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550
 gtgctaagtc aaaaaaatc gaagcaacaa ggtgttcctc aggtatctct 600
 ggtagaataa gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
 ttctgtataa agtacaacaa gaaaagcat ccataatgtt tatgcaaagt 750
 attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
 tccaagccta caaaacataa agtgcaattt tagaagtaca tgggagggtg 850
 ttagcaattc tgaggatttt aaaaacacca taccatggt gacaccacct 900
 cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgott 950
 agttcttgat agtctggaa gcatgggggg taaggaccgc ctaaactgaa 1000
 tgaatcaagc agcaaaacat ttctgtctgc agactgttg aaatggatcc 1050
 tgggtgggga tggttcactt tgatagtact gccactattg taaataagct 1100
 aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
 ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200
 tttcagggtg ttggagagct acattcccaa ctogatggat ccgaagtact 1250
 gctgctgact gatggggagg ataacactgc aagtcttgt attgatgaag 1300
 tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350
 gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
 tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450
 ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500
 aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550
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 ccaatcacag tgaatgctaa aatgaataag gacgtaaaaca gtttccccag 1850
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900
 gagccaatgt gactgctttc attgaatcac agaattggaca tacagaagtt 1950
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaattgatgg 2000
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 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
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 caagtcccaa gccttcctt gcctgaccaa taccaccaa gtcaaatcac 2300
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 caccaggaga taattttgat gtggaaaag ttcaacgtta tatcataaga 2400
 ataagtgcga gtattcttga tctaagagac agttttgatg atgctcttca 2450
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 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatatatt 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaatcct gatgacattg 2650
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 aattgttaac tttattttaa gtaccacat ttgaacctta acgaagaaaa 2800
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 gtaaaggata tttctgaatc ttaaaattca tcccatgtgt gatcataaac 2900
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 aacactcatg gatatgtaaa aactgtcaag attaaaattt aatagtttca 3000
 tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050
 tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcattctatct gagtagtcaa 3150
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly	
			20						25					30	
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp	
			35						40					45	
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser	
			50						55					60	
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn	
			65						70					75	
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr	
			80						85					90	
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	
			95						100					105	
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	
			110						115					120	
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	
			125						130					135	
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	
			140						145					150	
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	
			155						160					165	
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	
			170						175					180	
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	
			185						190					195	
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	
			200						205					210	
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	
			215						220					225	
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	
			230						235					240	
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	
			245						250					255	
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg	
			260						265					270	
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr	

275										280					285				
Ile	Pro	Met	Val	Thr	Pro	Pro	Pro	Pro	Pro	Val	Phe	Ser	Leu	Leu					
				290						295				300					
Lys	Ile	Ser	Gln	Arg	Ile	Val	Cys	Leu	Val	Leu	Asp	Lys	Ser	Gly					
			305						310					315					
Ser	Met	Gly	Gly	Lys	Asp	Arg	Leu	Asn	Arg	Met	Asn	Gln	Ala	Ala					
			320						325					330					
Lys	His	Phe	Leu	Leu	Gln	Thr	Val	Glu	Asn	Gly	Ser	Trp	Val	Gly					
			335						340					345					
Met	Val	His	Phe	Asp	Ser	Thr	Ala	Thr	Ile	Val	Asn	Lys	Leu	Ile					
			350						355					360					
Gln	Ile	Lys	Ser	Ser	Asp	Glu	Arg	Asn	Thr	Leu	Met	Ala	Gly	Leu					
			365						370					375					
Pro	Thr	Tyr	Pro	Leu	Gly	Gly	Thr	Ser	Ile	Cys	Ser	Gly	Ile	Lys					
			380						385					390					
Tyr	Ala	Phe	Gln	Val	Ile	Gly	Glu	Leu	His	Ser	Gln	Leu	Asp	Gly					
			395						400					405					
Ser	Glu	Val	Leu	Leu	Leu	Thr	Asp	Gly	Glu	Asp	Asn	Thr	Ala	Ser					
			410						415					420					
Ser	Cys	Ile	Asp	Glu	Val	Lys	Gln	Ser	Gly	Ala	Ile	Val	His	Phe					
			425						430					435					
Ile	Ala	Leu	Gly	Arg	Ala	Ala	Asp	Glu	Ala	Val	Ile	Glu	Met	Ser					
			440						445					450					
Lys	Ile	Thr	Gly	Gly	Ser	His	Phe	Tyr	Val	Ser	Asp	Glu	Ala	Gln					
			455						460					465					
Asn	Asn	Gly	Leu	Ile	Asp	Ala	Phe	Gly	Ala	Leu	Thr	Ser	Gly	Asn					
			470						475					480					
Thr	Asp	Leu	Ser	Gln	Lys	Ser	Leu	Gln	Leu	Glu	Ser	Lys	Gly	Leu					
			485						490					495					
Thr	Leu	Asn	Ser	Asn	Ala	Trp	Met	Asn	Asp	Thr	Val	Ile	Ile	Asp					
			500						505					510					
Ser	Thr	Val	Gly	Lys	Asp	Thr	Phe	Phe	Leu	Ile	Thr	Trp	Asn	Ser					
			515						520					525					
Leu	Pro	Pro	Ser	Ile	Ser	Leu	Trp	Asp	Pro	Ser	Gly	Thr	Ile	Met					
			530						535					540					
Glu	Asn	Phe	Thr	Val	Asp	Ala	Thr	Ser	Lys	Met	Ala	Tyr	Leu	Ser					
			545						550					555					
Ile	Pro	Gly	Thr	Ala	Lys	Val	Gly	Thr	Trp	Ala	Tyr	Asn	Leu	Gln					
			560						565					570					
Ala	Lys	Ala	Asn	Pro	Glu	Thr	Leu	Thr	Ile	Thr	Val	Thr	Ser	Arg					
			575						580					585					
Ala	Ala	Asn	Ser	Ser	Val	Pro	Pro	Ile	Thr	Val	Asn	Ala	Lys	Met					

590					595					600				
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala
				605					610					615
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr
				620					625					630
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu
				635					640					645
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val
				650					655					660
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser
				665					670					675
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys
				680					685					690
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val
				695					700					705
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp
				710					715					720
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser
				725					730					735
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro
				740					745					750
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val
				755					760					765
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn
				770					775					780
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala
				785					790					795
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val
				800					805					810
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser
				815					820					825
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His
				830					835					840
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser
				845					850					855
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala
				860					865					870
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro
				875					880					885
Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu
				890					895					900
Val	Leu	Ser	Val	Ile	Gly	Ser	Val	Val	Ile	Val	Asn	Phe	Ile	Leu

Ser Thr Thr Ile

<210> 380
 <211> 3877
 <212> DNA
 <213> Homo sapiens

<400> 380
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 aagaccatag gtccccgggc aggggtgaca acaggtgtca tctttttgat 100
 ctcgtgtgtg gctgccttcc tatttcaagg aaagacgcca aggttaatttt 150
 gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
 cccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
 gtccttcggt ctttaactgt ggttgaggga gagaaccttt gtgggggtgc 300
 gttctcttag cagtgtctag aagtgacttg cctgaggggtg gaccagaaga 350
 aaggaaaggt ccctcttgc tgttggtctgc acatcaggaa ggctgtgatg 400
 ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgctc 450
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 caatcacctg ccttacacgg cctctgattt catagaaggg atctaccgaa 1300

cagaaagga caaaggaca ttgtatgagc tcaccttcaa aggggaccac 1350
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<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

Met	Met	Met	Val	Arg	Arg	Gly	Leu	Leu	Ala	Trp	Ile	Ser	Arg	Val
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Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
				20					25					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
				35					40					45
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50					55					60
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
				65					70					75
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80					85					90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	
				275					280					285	
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	
				290					295					300	
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	
				305					310					315	
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	
				320					325					330	
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	
				335					340					345	
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	
				350					355					360	
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
				365					370					375	
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	
				380					385					390	
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	
				395					400					405	

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	
				410					415					420	
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
				425					430					435	
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
				440					445					450	
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
				455					460					465	
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
				470					475					480	
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
				515					520					525	
Lys	Thr	Ser	Ser	Lys	Lys	Thr									
				530											

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaaggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtac aatcctggca taatatacgg ccaccatgat gcagtgccc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

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actctgtcaa ccaggtgcag aaaatgcttt taaagtgaga cttagtagtca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaa c gatggtagc tttctccatg agaaaagttc ccaacagaga 200
agcaacagaa atttcccatg tcctactttg caatgtaacc cagagggtagt 250
cattctggtt tgtggttaca gacccttcaa aaaatcacac ctttctgct 300
gttgaggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttctttcta aatgacaaa ctctggaatt tttaaaaato cttccacac 400
ttgcaccacc catggaccca tctgtgccca tctggattat tatatttgg 450
gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500
gatctggcaa cgtagaagaa agaacaaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaac atgatcaca ttgaaaatgg catccctct 600
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gatgagaggc tcacccctct ctgaagggt gttgttctgc ttctcaaga 700
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tgtgtctgaa agtgaaaagc aatcaattat accaccaac accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaatatatt tctgacagta 900
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actaagtaaa caaaagtgc aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300

agtaataatc atctottttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met	Leu	Trp	Leu	Leu	Phe	Phe	Leu	Val	Thr	Ala	Ile	His	Ala	Glu
1			5						10				15	

Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
			20						25					30

Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
			35						40					45

Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
			50						55					60

Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys
			65						70					75

Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro
			80						85					90

Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile
			95						100					105

Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp
			110						115					120

Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro
			125						130					135

Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile
			140						145					150

Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly
			155						160					165

Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp
			170						175					180

Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly
			185						190					195

Ile	Pro	Ser	Asp	Pro	Leu	Asp	Met	Lys	Gly	Gly	Ile	Leu	Met	Met
			200						205					210

Pro Ser

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

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 gccaaaggctg ggtttccctc atgtatggca agagctctac tcgtgcggtg 150
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 aatcaaaaag agaggaaagg ctcaaccaag agaaaaaggc ctctgtttat 750
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 acagtaaact ctaaattcaa actgttaa atgacattttt tttttatgtc 1300
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 ccaggtgata gatttttgtc g 1371

<210> 389
 <211> 215
 <212> PRT
 <213> Homo sapiens

<400> 389
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly
 1 5 10 15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctagaggcca gagc 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagc 24

<210> 392
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 392
gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
<211> 471
<212> DNA
<213> Homo sapiens

<400> 393
gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
agcagtcctg gtactcttgg gagtttccat ctttctggto tctgccaga 100
atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
gatgatgaag cccctgatgc tgaaaccact gctgctgcaa ccaactgcgac 200
cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgtg 250
aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
tattcatgct tctgtgtatt tcatccaact acttaccttg cctacgatat 400
cccttttato tctaatacgt ttattttctt tcaaataaaa aataactatg 450
agcaacataa aaaaaaaaaa a 471

<210> 394
<211> 90
<212> PRT
<213> Homo sapiens

<400> 394
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
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Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
20 25 30
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
35 40 45
Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
50 55 60
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
65 70 75
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
80 85 90

<210> 395
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gtccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
cagggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgttcc 50
aaccttgac ccctaggggt ctggatttgc tggtaacaa gataacctga 100
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc cttgtttacc gagaggacac 250
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gcctcggggc catggtocct gtctaggga gcaattctca accttcttgc 550
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaaa actgagaaat gggccgggca cgttggtcga cgcctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacagg aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
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 ccggcctgcc tcagcgcccc ccatgggcgg cccagaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgcagccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggaggtg gcccaggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gcctgccta ccgagaattt 450
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggccct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggccccctgt cagggaggag ctgcctgttc actgggatca 700
 gccaggcgcc cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagcccat tggggagggg tggaggaagg 800
 acatgtaccc tttcatgcct acacaccct cattaaagca gagtctgtgc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401

<211> 198

<212> PRT

<213> Homo sapiens

<400> 401

Met	Pro	Val	Pro	Ala	Leu	Cys	Leu	Leu	Trp	Ala	Leu	Ala	Met	Val
1				5					10				15	
Thr	Arg	Pro	Ala	Ser	Ala	Ala	Pro	Met	Gly	Gly	Pro	Glu	Leu	Ala
				20					25				30	
Gln	His	Glu	Glu	Leu	Thr	Leu	Leu	Phe	His	Gly	Thr	Leu	Gln	Leu
				35					40				45	
Gly	Gln	Ala	Leu	Asn	Gly	Val	Tyr	Arg	Thr	Thr	Glu	Gly	Arg	Leu
				50					55				60	
Thr	Lys	Ala	Arg	Asn	Ser	Leu	Gly	Leu	Tyr	Gly	Arg	Thr	Ile	Glu
				65					70				75	
Leu	Leu	Gly	Gln	Glu	Val	Ser	Arg	Gly	Arg	Asp	Ala	Ala	Gln	Glu
				80					85				90	
Leu	Arg	Ala	Ser	Leu	Leu	Glu	Thr	Gln	Met	Glu	Glu	Asp	Ile	Leu
				95					100				105	
Gln	Leu	Gln	Ala	Glu	Ala	Thr	Ala	Glu	Val	Leu	Gly	Glu	Val	Ala
				110					115				120	
Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val
				125					130				135	
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu
				140					145				150	
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala
				155					160				165	
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln
				170					175				180	
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
 ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaattggact 50
 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaactcg agtgagagac 150
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccctgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
 aagttcacia gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgag gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
 aagtttggtg acgtcaacgg aatcgctatc tcttctctca actgggaccg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatcgagtg tcaccatccc taaataggtc tttctccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgcccttcct ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
 tcacttgtac aaaccagttt tgttttcaaa aaatcacagt agcaatgcaa 950
 ctcacactc tagaaaagca agcttaggct acotgaaaga ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgctata taatccaaaa acttttcagc ctgttgctca ttctgtccca 1100
 tgctggcaat aataccttgt cagcccatca cccttatttt gaattgctcc 1150
 atctcctggt gggacttgta tcttgtctgc catatcagaa cacaaacccc 1200
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatttg 1300

atcaattttc attccaccca ttgcattaca acctotaact taaatgggta 1350
 accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acattttatt tgcttttagca tccttactct caccttttat 1450
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500
 tttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttgga aattgcatac 1600
 gtctgtgcaa ttttttattc tgcctagtgc tattctgctt gtttaactag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
 tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
 cttcaaataa atagtgttta aacattgaat gtgtttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt tttagctgttt 1850
 tcattgtctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
 1 5 10 15
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Asp Gln Thr Thr
 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165									
Ala	Gln	Pro	Asn	Gly	Gly	Lys	Arg	Glu	Asn	Cys	Val	Leu	Phe	Ser
				170					175					180
Gln	Ser	Ala	Gln	Gly	Lys	Trp	Ser	Asp	Glu	Ala	Cys	Arg	Ser	Ser
				185					190					195
Lys	Arg	Tyr	Ile	Cys	Glu	Phe	Thr	Ile	Pro	Lys				
				200					205					

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctgggttatt cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacagcg ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gccctctcgg 100
 ggctctgcgt ggccctgtcc tgcagctcgg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gccctgtcgt gcgctggagt cggcggcgga 200
 ggccggggcc gggaacctgg ccaacccctc cggcaccctc aaccgcgtga 250
 agctcctgct gaggagcctg ggcacccccc tgaaccacct catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggctga 450
 aaaccccgcc gcggggagga ccgtccatcc cttcccccg gccctctca 500
 ataacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
 1 5 10 15
 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

<400> 409
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 aaggaggaga ctctttggcc tccgcagccg atcacatgaa ggtggtgcc 100
 agtctectgc tctccgtcct cctggcacag gtgtggctgg taccggctt 150
 ggccccagt cctcagtcgc cagagacccc agcccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccgtga ggaagagaaa gcctggctga tggccagcag 300
 gcgcagcgtt gccaggaga cttcaaaactt cggattcagc ctgtgcgaa 350
 agatctccat gaggcacgat ggcaacatgg ttttctctcc atttggcatg 400
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtccc acttgaggc cctgaagccc accaagccc 500

ggctcctgcc ttccctcttt aagggactca gagagaccct ctcccgcaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcaccc acaaggattt 600
 tgatgtcaaa gagactttct tcaatttato caagaggtat tttgatacag 650
 agtgcgtagc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atctgtttca 800
 aagggaaatg gttgacccca tttgaccctg tcttcacoga agtcgacact 850
 ttccacctgg acaagtacaa gaccattaag gtgccatga tgtacggtag 900
 aggcaagttt gctccacct ttgacaagaa ttttcgttgt catgtctcca 950
 aactgcctca ccaaggaaat gccaccatgc tggtagtcct catggagaaa 1000
 atgggtgacc acctgcacct tgaagactac ctgaccacag acttggtgga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagtt tcttttccga 1100
 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200
 tactggaaga aatctccaag tatccagggt tttaagaaga acagtgtattg 1250
 aagttgatga aaggggcact gaggcagtag caggaatctt gtcagaaatt 1300
 actgcttatt ccatgcctcc tgtcatcaaa gtggaccggc catttcattt 1350
 catgatctat gaagaaacct ctggaatgct tctgtttctg ggcagggttg 1400
 tgaatccgac tctctataa ttcaggacat gcataagcac ttcgtgctgt 1450
 agtagatgct gaatctgagg tatcaaacac acacaggata ccagcaatgg 1500
 atggcagggg agagtgttcc tttgttctt aactagttta ggggtgtctc 1550
 aaataaatac agtagtcccc acttatctga gggggataca ttcaaagacc 1600
 cccagcagat gctgaaacg gtggacagtg ctgaacctta tatatatttt 1650
 ttctacaca tacataccta tgataaagtt taattataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaattttt catttaatgt ttttgacca tggttgacca tggttaactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact acaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln	1	5	10	15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu	20	25	30	
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro	35	40	45	
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala	50	55	60	
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu	65	70	75	
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	80	85	90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	95	100	105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	110	115	120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	125	130	135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	140	145	150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	155	160	165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	170	175	180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	185	190	195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	200	205	210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn	215	220	225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	230	235	240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	245	250	255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	260	265	270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	275	280	285	

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
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 ccagacatg aggaggctcc tcttggtcac cagcctggtg gttgtgctgc 100
 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcagcaccca gagaaggcct ggggccccgc 200
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgtccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggccccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggccgt gtcctgagtc ccgagcccca ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgcc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412
<211> 151
<212> PRT
<213> Homo sapiens

<400> 412
Met Arg Arg Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150
Gln

<210> 413
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 413
agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50
aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgtttctc 200
gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggctgga cctgtgtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaact acaacacctt tggaatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcactct 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtagc gcacggacac tggcttctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa gaaagtgtt 700
 ggactgacaa cggcccgtg atccctgtg tctatgattt tggcgacgcc 750
 cagaaaacag catcttatta ctaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tattaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggtc accggaatga aactgagca tcaatgcatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
 ttctggtttt gattggagtg gatattgaac tcatgttggg tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagattt 1050
 tgtgggaggg aaccagacc tctcctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

	125		130		135
Asn Pro Gly Tyr	Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile	Trp		
	140		145		150
His Val Pro Asn	Lys Ser Pro Met Gln	His Trp Arg Asn Ser	Ser		
	155		160		165
Leu Leu Arg Tyr	Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu	Gly		
	170		175		180
His Asn Leu Phe	Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr	Gly		
	185		190		195
Glu Gly Lys Cys	Trp Thr Asp Asn Gly	Pro Val Ile Pro Val	Val		
	200		205		210
Tyr Asp Phe Gly	Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser	Pro		
	215		220		225
Tyr Gly Gln Arg	Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg	Val		
	230		235		240
Phe Asn Asn Glu	Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met	Arg		
	245		250		255
Val Thr Gly Cys	Asn Thr Glu His His	Cys Ile Gly Gly Gly	Gly		
	260		265		270
Tyr Phe Pro Glu	Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser	Gly		
	275		280		285
Phe Asp Trp Ser	Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser	Ser		
	290		295		300
Arg Glu Ile Thr	Glu Ala Ala Val Leu	Leu Phe Tyr Arg			
	305		310		

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 ggcggagcgg cgccgggtgc gcagaggagc cgctctcgcc gccgccacct 50
 cggtggtggg cccacgaggc tgccgcatcc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcaggtg 150
 ctacgcgtgc tggggggcgc ccatgaaagc gcagccatgg cggcattctgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgtct aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccaccatg aaacctacag cggcattctaa tacaacaaca ccaggggatg 400
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaacaaca 450
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
gttggtggta ttgtattaac gctgggagtt ttatctattc ttacattgg 650
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750
attgatgctg cccatcaat taattttggt ttattaatag tttaaaacaa 800
tattctcttt ttgaaaatag tataaacagg ccattgcatat aatgtacagt 850
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
gttcatagta agacaaacaa gtcctatctt ttttttttgg ctgggggtggg 1000
ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050
agaatgcat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
tttgggtatc ttttgtagct cacataaaga acttcagtgc ttttcagagc 1150
tggaatatatc ttaattacta atgccacaca gaaattatac aatcaaaacta 1200
gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly
1				5					10					15
Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
			20						25					30
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
			35						40					45
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
			50						55					60
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
			65						70					75
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys
			80						85					90
Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr
			95						100					105
Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser
			110						115					120
Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140	145	150		
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155	160	165		
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170	175	180		
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185	190	195		
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200	205			

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccca 50
 gccgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100
 gogatggcga ccctgtgggg aggccttctt cggcttggct ccttgcctag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgag ctgtcagacg 200
 ccgccaaaga tttcagagat gtcagatgta aatgtatctg cctccctat 250
 aaagaaaatt ctgggcataat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgttgtgg agcccatgcc tgtgcggggg cctgatgtag 350
 aagcactactg tctacgctgt gaatgcaaat atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gcccactactg aagaggcgcc 500
 tcttttgaca tgcacagtgt atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tccaagagca gcgaaagtct gtctttgacc ggcagtgtgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactgaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtcagcc aataagtcct ttcctatttg tgacttttac taataaaaaa 950
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 tttgtgtgtt ttgttttttg tttgtttgtt ttggtgggag aggggaggga 1100
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaat agacottacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctggtggct ttccacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
 tagtacottt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaacccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggtcgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtctg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln
				140						145				150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg
				155					160					165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys
				170					175					180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val
				185					190					195
Val	Leu	Ser												

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccaccgtgag cagtcatggc gtactccaca gtgcagagag 50
 tgcgtctggc ttctgggctt gtcctggctc tgcgtctgct gctgccaaag 100
 gccttcctgt cccgcgggaa gcggcaggag ccgcccga caccgaagg 150
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcacctcag 200
 atggccagac tctgtgggct cgtttccaga ggtctcacct tgcgaggcca 250
 tttgcaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300
 aagaggtctg atggggcaga ttattccaat ctacgggttt gggatttttt 350
 tatatatact gtacattcta tttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
 aacttcttat agttcataaa attatttcaa atccatcaco tctttaaatc 500
 ctgcctcctc ttcatgaggt acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgttt tgccccaaaa ttcacaaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtgatata attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg	Phe	Pro	Pro	Met	Met	His	His	His	Gln	Ala	Pro	Ser	Asp	Gly
				50					55					60
Gln	Thr	Pro	Gly	Ala	Arg	Phe	Gln	Arg	Ser	His	Leu	Ala	Glu	Ala
				65					70					75
Phe	Ala	Lys	Ala	Lys	Gly	Ser	Gly	Gly	Gly	Ala	Gly	Gly	Gly	Gly
				80					85					90
Ser	Gly	Arg	Gly	Leu	Met	Gly	Gln	Ile	Ile	Pro	Ile	Tyr	Gly	Phe
				95					100					105
Gly	Ile	Phe	Leu	Tyr	Ile	Leu	Tyr	Ile	Leu	Phe	Lys	Val	Ser	Arg
				110					115					120
Ile	Ile	Leu	Ile	Ile	Leu	His	Gln							
				125										

<210> 421
 <211> 1630
 <212> DNA
 <213> Homo sapiens

<400> 421
 cggtctcgagt gcagctgtgg ggagatttca gtgcattgcc tccctgggt 50
 gctcttcato ttgatttga aagttgagag cagcatgttt tgccactga 100
 aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
 ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
 gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
 actggactct gtcaccagga gagcacgcca aggacgaata tgtgtatata 300
 tattactcca atctcagtgt gcctattggg cgcttcacaga accgcgtaca 350
 cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
 tgcaagaggg tgaccagggg acctatatct gtgaaatccg cctcaaaggg 450
 gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
 gccc aaag ctcatggtcc atgtgggtg attgattcag atgggatgtg 550
 ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatatatt 600
 tcaggacggc gcgcaaagga ggagattgta ttctgttact accacaaact 650
 caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
 tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
 ggagtgaagg agtcagatgg aggaaactac acctgcagta tccacctagg 800
 gaacctgggt ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
 ctctgaacct ggtgacctcg gcagccctga ggcctctggt ctggggtggt 900
 aatcagttgg tgatcattgt gggaaattgtc tgtgcoacaa tctgtctgct 950
 cctgtttctg atattgatcg tgaagaagac ctgtggaaat aagatttcag 1000

tgaattctac agtcttgggtg aagaacacga agaagactaa tccagagata 1050
aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100
ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtgaag 1150
aatcagaggc cacctacatg accatgcacc cagtttgcc ttctctgagg 1200
tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgcaaaa 1250
aacacagcaa gccttttgag aagaatggag agtccctca tctcagcagc 1300
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgtattc 1350
agactccgc tctccagct gtctcctgt ctctattgtt ggtaataca 1400
ctgaagatgg agaatttga gcctggcaga gagactggac agctctggag 1450
gaacaggcct gctgagggga ggggagcatg gacttgcct ctggagtggg 1500
acactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550
ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
gaatcagaga taaaaacaa cccaaatcaa 1630

<210> 422
<211> 394
<212> PRT
<213> Homo sapiens

<400> 422
Met Phe Cys Pro Leu Lys Leu Ile Leu Pro Val Leu Leu Asp
1 5 10 15
Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
20 25 30
Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
35 40 45
Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
50 55 60
Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
65 70 75
Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
80 85 90
Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
95 100 105
Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
110 115 120
Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
125 130 135
Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
140 145 150
Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

	155		160		165
Thr Lys Val Glu Trp	Ile Phe Ser Gly Arg	Arg Ala Lys Glu Glu			
170		175		180	
Ile Val Phe Arg Tyr	Tyr His Lys Leu Arg	Met Ser Val Glu Tyr			
185		190		195	
Ser Gln Ser Trp Gly	His Phe Gln Asn Arg	Val Asn Leu Val Gly			
200		205		210	
Asp Ile Phe Arg Asn	Asp Gly Ser Ile Met	Leu Gln Gly Val Arg			
215		220		225	
Glu Ser Asp Gly Gly	Asn Tyr Thr Cys Ser	Ile His Leu Gly Asn			
230		235		240	
Leu Val Phe Lys Lys	Thr Ile Val Leu His	Val Ser Pro Glu Glu			
245		250		255	
Pro Arg Thr Leu Val	Thr Pro Ala Ala Leu	Arg Pro Leu Val Leu			
260		265		270	
Gly Gly Asn Gln Leu	Val Ile Ile Val Gly	Ile Val Cys Ala Thr			
275		280		285	
Ile Leu Leu Leu Pro	Val Leu Ile Leu Ile	Val Lys Lys Thr Cys			
290		295		300	
Gly Asn Lys Ser Ser	Val Asn Ser Thr Val	Leu Val Lys Asn Thr			
305		310		315	
Lys Lys Thr Asn Pro	Glu Ile Lys Glu Lys	Pro Cys His Phe Glu			
320		325		330	
Arg Cys Glu Gly Glu	Lys His Ile Tyr Ser	Pro Ile Ile Val Arg			
335		340		345	
Glu Val Ile Glu Glu	Glu Glu Pro Ser Glu	Lys Ser Glu Ala Thr			
350		355		360	
Tyr Met Thr Met His	Pro Val Trp Pro Ser	Leu Arg Ser Asp Arg			
365		370		375	
Asn Asn Ser Leu Glu	Lys Lys Ser Gly Gly	Gly Met Pro Lys Thr			
380		385		390	
Gln Gln Ala Phe					

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50
 ccatctcaca tgggtctacc ctactaaaga caggaagatc ataaactgac 100
 agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150
 ctctgagctc agttgcagta ctcggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaaac cagctctcgt ctccgttggc 250
 cctgcacccct cctcctggtg gcgtgtgatg gctttgattc tgctgaccc 300
 gtgcgtgggg atggttgtcg ggctggtggc totggggatt tggctgtca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaagtc ataatgcag ccctgtgac acaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacia cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600
 tgacaaccgg aacattgttg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcca atgagggtctg gaagtggagg 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctaccc 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactaccta atgcaaagag gtggacagga taacacagat 900
 aagggcttta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg
 1 5 10 15
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp
 20 25 30
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140		145		150
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155		160		165
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170		175		180
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185		190		195
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200		205		210
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215		220		225
Asp Gln Leu Pro					

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tcccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 429
 gactgccctc cctgccca 17

 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 430
 caaaaagcct ggaagtcttc aaag 24

 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 431
 cagctggact gcaggtgcta 20

 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 432
 cagtgagcac agcaagtgtc ct 22

 <210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 433
 ggccacctcc ttgagtcttc agttccct 28

 <210> 434
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 434
 caactactgg ctaaagctgg tgaa 24

 <210> 435
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 435
 cctttctgta taggtgatac ccaatga 27

 <210> 436
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

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<212> PRT

<213> Homo Sapien

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Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val
				35					40					45
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg
				50					55					60
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser
				65					70					75
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp
				80					85					90
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile
				95					100					105
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys
				110					115					120
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu
				125					130					135
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn
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Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Tyr	Arg	Gln	Gln	Gln	Ser
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Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu
				185					190					195
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His
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Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys

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Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
35 40 45
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
50 55 60
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
65 70 75
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
80 85 90
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
110 115 120
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
125 130 135
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
140 145 150
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
155 160 165
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
170 175 180
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
185 190 195
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
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215 220 225

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35 40 45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
65 70 75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
80 85 90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
110 115 120

Thr Gly Leu Tyr	Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr	Pro
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Ser Glu Leu Phe	Thr Pro Glu Cys Lys Phe Lys Glu Ser Val	Phe
140	145	150
Glu Asn Tyr Tyr	Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln	Gln
155	160	165
Glu Ser Gly Arg	Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly	Gln
170	175	180
Ala Met Lys Gly	Asn Arg Val Lys Lys Thr Lys Pro Ala Ala	His
185	190	195
Phe Leu Pro Lys	Pro Leu Glu Val Ala Met Tyr Arg Glu Pro	Ser
200	205	210
Leu His Asp Val	Gly Glu Thr Val Pro Lys Pro Gly Val Thr	Pro
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 catggaaagc cacctgccca tgccctgctat cgagcatgag cacctaaatc 2600
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 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaacaa 2850
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<210> 501

<211> 640

<212> PRT

<213> Homo Sapien

<400> 501

Met	Leu	Asn	Lys	Met	Thr	Leu	His	Pro	Gln	Gln	Ile	Met	Ile	Gly
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Pro	Arg	Phe	Asn	Arg	Ala	Leu	Phe	Asp	Pro	Leu	Leu	Val	Val	Leu
				20					25					30
Leu	Ala	Leu	Gln	Leu	Leu	Val	Val	Ala	Gly	Leu	Val	Arg	Ala	Gln
				35					40					45
Thr	Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val
				50					55					60
Ile	Cys	Val	Arg	Lys	Asn	Leu	Arg	Glu	Val	Pro	Asp	Gly	Ile	Ser
				65					70					75
Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile
				80					85					90
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu
				95					100					105
Gln	Leu	Ser	Arg	Asn	His	Ile	Arg	Thr	Ile	Glu	Ile	Gly	Ala	Phe
				110					115					120
Asn	Gly	Leu	Ala	Asn	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Arg
				125					130					135
Leu	Thr	Thr	Ile	Pro	Asn	Gly	Ala	Phe	Val	Tyr	Leu	Ser	Lys	Leu
				140					145					150
Lys	Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser
				155					160					165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	
				170					175					180	
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	
				185					190					195	
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	
				200					205					210	
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	
				215					220					225	
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	
				230					235					240	
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	
				245					250					255	
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	
				260					265					270	
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	
				275					280					285	
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	
				290					295					300	
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	
				305					310					315	
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	
				320					325					330	
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	
				335					340					345	
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	
				350					355					360	
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	
				365					370					375	
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	
				380					385					390	
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	
				395					400					405	
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	
				410					415					420	
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	
				425					430					435	
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	
				440					445					450	
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	
				455					460					465	
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	
				470					475					480	

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
				485					490					495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
				500					505					510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
				530					535					540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
				545					550					555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
				560					565					570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
				575					580					585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
				590					595					600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
				605					610					615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
				620					625					630
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile					
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<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
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 agcaactgag cggggaagcg cccgcgtccg gggatcgga tgctccctcct 200
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 caactggggc ttccagaaaa agacactctg gatattgaat ggtggtcac 350
 cgataatgaa gggaaacaaa aagtgggtgat cacttactcc agtcgtcatg 400
 tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450
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<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503

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Thr	Leu	Gly	Thr	His	Thr	Glu	Ile	Lys	Arg	Val	Ala	Glu
				20					25			30
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu
				35					40			45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly
				50					55			60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn
				65					70			75
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn
				80					85			90
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro
				95					100			105
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg
				110					115			120
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser
				125					130			135
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp
				140					145			150
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val
				155					160			165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg
				170					175			180
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val
				185					190			195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys
				200					205			210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val
				215					220			225

Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly	230	235	240
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu	245	250	255
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro	260	265	270
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val	275	280	285
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	290	295	300
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln	305	310	315
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr	320	325	330
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	335	340	345
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	350	355	360
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val			365	370	

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
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 ctctctgtgcg gagtagtgga ttctgccaga agtttgagta tcaactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttacgct tagtcccgaa gaccagggac cgctggacat cgagtggctg 250
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatoc agatctgaaa ggccgagtac 350
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 aatttacaac tgtcagatat tggcacatat cagtgcгааг tgaaaaaagc 450
 tcctggtgtt gcaaataaga agattcatct ggtagttctt gttaagcctt 500
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 tgacttcacg tgttatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgato agtgectgtt 750
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 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300
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 cttctataaa aataagtttg atggtttggc ccatctaact tcactactat 1950
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 cctcgataca ttcttggtt ttttctgggc aaagggtgcc acattggaag 2250
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<210> 505

<211> 352

<212> PRT

<213> Homo Sapien

<400> 505

Met	Ala	Leu	Leu	Leu	Cys	Phe	Val	Leu	Leu	Cys	Gly	Val	Val	Asp	1	5	10	15
Phe	Ala	Arg	Ser	Leu	Ser	Ile	Thr	Thr	Pro	Glu	Glu	Met	Ile	Glu	20	25	30	
Lys	Ala	Lys	Gly	Glu	Thr	Ala	Tyr	Leu	Pro	Cys	Lys	Phe	Thr	Leu	35	40	45	
Ser	Pro	Glu	Asp	Gln	Gly	Pro	Leu	Asp	Ile	Glu	Trp	Leu	Ile	Ser	50	55	60	
Pro	Ala	Asp	Asn	Gln	Lys	Val	Asp	Gln	Val	Ile	Ile	Leu	Tyr	Ser	65	70	75	
Gly	Asp	Lys	Ile	Tyr	Asp	Asp	Tyr	Tyr	Pro	Asp	Leu	Lys	Gly	Arg	80	85	90	
Val	His	Phe	Thr	Ser	Asn	Asp	Leu	Lys	Ser	Gly	Asp	Ala	Ser	Ile	95	100	105	
Asn	Val	Thr	Asn	Leu	Gln	Leu	Ser	Asp	Ile	Gly	Thr	Tyr	Gln	Cys	110	115	120	
Lys	Val	Lys	Lys	Ala	Pro	Gly	Val	Ala	Asn	Lys	Lys	Ile	His	Leu				

	125		130		135
Val Val Leu Val	Lys 140	Pro Ser Gly Ala	Arg 145	Cys Tyr Val Asp	Gly 150
Ser Glu Glu Ile	Gly 155	Ser Asp Phe Lys	Ile 160	Lys Cys Glu Pro	Lys 165
Glu Gly Ser Leu	Pro 170	Leu Gln Tyr Glu	Trp 175	Gln Lys Leu Ser	Asp 180
Ser Gln Lys Met	Pro 185	Thr Ser Trp Leu	Ala 190	Glu Met Thr Ser	Ser 195
Val Ile Ser Val	Lys 200	Asn Ala Ser Ser	Glu 205	Tyr Ser Gly Thr	Tyr 210
Ser Cys Thr Val	Arg 215	Asn Arg Val Gly	Ser 220	Asp Gln Cys Leu	Leu 225
Arg Leu Asn Val	Val 230	Pro Pro Ser Asn	Lys 235	Ala Gly Leu Ile	Ala 240
Gly Ala Ile Ile	Gly 245	Thr Leu Leu Ala	Leu 250	Ala Leu Ile Gly	Leu 255
Ile Ile Phe Cys	Cys 260	Arg Lys Lys Arg	Arg 265	Glu Glu Lys Tyr	Glu 270
Lys Glu Val His	His 275	Asp Ile Arg Glu	Asp 280	Val Pro Pro Pro	Lys 285
Ser Arg Thr Ser	Thr 290	Ala Arg Ser Tyr	Ile 295	Gly Ser Asn His	Ser 300
Ser Leu Gly Ser	Met 305	Ser Pro Ser Asn	Met 310	Glu Gly Tyr Ser	Lys 315
Thr Gln Tyr Asn	Gln 320	Val Pro Ser Glu	Asp 325	Phe Glu Arg Thr	Pro 330
Gln Ser Pro Thr	Leu 335	Pro Pro Ala Lys	Phe 340	Lys Tyr Pro Tyr	Lys 345
Thr Asp Gly Ile	Thr 350	Val Val			

<210> 506
 <211> 1705
 <212> DNA
 <213> Homo Sapien

<400> 506
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 ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200
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 tctgaagtca ttctctactc tggccaacaa ctttgttctc atcgtgtcac 700
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgc 750
 cacaggcggg ttctgtctat ccggagagca ttcaaacagt tggacgtaga 800
 agcagctctg accaaagccc ttggggaagt ggacattctt ctgacctgga 850
 tgcagaaatt ctacaagctc tgaatgtcta gaccaggacc tccctcccc 900
 tggcactggg ttgttccctg tgtcatttca aacagtctcc ctctctatgc 950
 tgttcaactg acacttcacg cccttgcca tgggtcccat tcttgccca 1000
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtccag 1050
 gaaggtgcct ctggatgctg tgaagagtct acagagaaga ttcttgtatt 1100
 tattacaact ctatttaatt aatgtcagta tttcaactga agttctatct 1150
 atttgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250
 cttagtaagt acttaataaa ctgtggtgct ttttttgcc tgtctttgga 1300
 ttgttaaaaa acagagaggg atgcttggat gtaaaactga acttcagagc 1350
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 ggggtaaggg gcatctgttt gaaaagtaaa cgataaaatg tggattaaag 1450
 tgcccagcac aaagcagatc ctcaataaac atttcatttc ccaccacac 1500
 tggccagctc accccatcat ccctttccct tgggtgccctc cttttttttt 1550
 tatctagtc attcttccct aatcttcac ttgagtgtca agctgacctt 1600
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 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg	
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Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met	
				20					25					30	
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln	
				35					40					45	
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln	
				50					55					60	
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala	
				65					70					75	
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg	
				80					85					90	
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser	
				95					100					105	
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val	
				110					115					120	
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys	
				125					130					135	
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln	
				140					145					150	
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser	
				155					160					165	
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu	
				170					175					180	
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile	
				185					190					195	
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu					
				200					205						

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggctctcagg agatgtctga ttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaaga gccatccaag ctaaggacac cttcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgtctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300

tcaaggatca tcaggagcca aacccccaaaa tcttgagaaa aatcagcagc 350
 attgccaaact ctttccctcta catgcagaaa actctgcggc aatgtcagga 400
 acagaggcag tgtcaactgca ggcaggaagc caccaatgcc accagagtca 450
 tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaaatcc 500
 ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
 aatgtttctca gcttgatgac aaggaacctg tatagtgtac cagggatgaa 600
 cccccctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650
 agatggggaa ggccccttgc agctgaaagt cccactggct ggccctcaggc 700
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 ataaattcca tattttacct atga 924

<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu
1				5					10					15
Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile
				20					25					30
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys
				35					40					45
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu
				50					55					60
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys
				65					70					75
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe
				80					85					90
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser
				95					100					105
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln
				110					115					120
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn
				125					130					135
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His
				140					145					150
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala

155

160

165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
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tggcttcgtt agaacgcggc tacaattaat acataacctt atgtatcata 100
cacatacgat ttagggtgaca ctatagaata acatccactt tgcctttctc 150
tccacaggtg tccactccca ggtccaactg cacctcgggt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgctca 250
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtcctcaga 300
gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatgga gcaccccatc agaccatcta cagtgccttg 450
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
atttcgacc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
tacgacgtct accactctcc tcagtatcac ttctctgtca gtctgggccg 650
ggcgaagaga gccttcctgc caggcatgaa cccacccccg tactcccagt 700
tcctgtcccc gaggaacgag atccccctaa ttcacttcaa ccccccata 750
ccacggcggc acacccggag cgccgaggac gactcggagc gggaccccct 800
gaacgtgctg aagccccggg ccgagatgac cccggccccg gctcctgtt 850
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaacca 900
ttagggtggt tcagggggcg tcgagtgaac acgcacgctg ggggaacggg 950
cccgaaggc tgcgcgccct tcgccaagtt catctagggt cgctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
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Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala
				35					40					45
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His
				50					55					60
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile
				65					70					75
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser
				80					85					90
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser
				95					100					105
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu
				110					115					120
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu
				125					130					135
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn
				140					145					150
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro
				155					160					165
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser
				170					175					180
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro
				185					190					195
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu
				200					205					210
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly
				215					220					225
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly
				230					235					240
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile				
				245					250					

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
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 ctgctgggag gttggggtct ctgggagctc tgcaggcccc agcaccgcga 150
 gaggacacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
 ctcttctagg gctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
 acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
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 tctccataga ggtgggtca gcagtggga aaacaacttc ctttgcctgg 1250
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 cccttcagag acaccacca tggacatgc aaccaagggg cccttccca 1350
 ccagcagga ccctcttctc tctgtccctc cgactacaac caacagcagc 1400
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 gggcagcatg tccaagcccc taacccaga tgtggcaaca ggacctcgc 1850
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gggtgccttg gactcacctt ggcacatggt ctgtgtttca gtaaagagag 1950
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 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
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 1 5 10 15
 Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
 20 25 30
 Arg Ala Asp Thr Ala Met Thr Thr Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	320	325	330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	335	340	345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	350	355	360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	365	370	375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	380	385	390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	395	400	405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	410	415	420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	425	430	435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	440	445	450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	455	460	465
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro	470	475	480

Gln Thr

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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ggcgccgggg tctctcgcac gccagagaga aatctcatca tctgtgcagc 150
cttcttaaag caaactaaga ccagaggagg gattatcctt gacctttgaa 200
gacaaaaact aaactgaaat ttaaaatgtt cttcggggga gaaggagct 250

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 cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500
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 acacctgggt gatTTTTTga ttttagtag agacgggggt tcaccatgtt 1850

ggtcaggctg gtctcaaact cctgacctag tgatccaccc tctcggcct 1900
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<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

Met	Phe	Phe	Gly	Gly	Glu	Gly	Ser	Leu	Thr	Tyr	Thr	Leu	Val	Ile	1	5	10	15
Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu	20	25	30	
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu	35	40	45	
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln	50	55	60	
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly	65	70	75	
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala	80	85	90	
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala	95	100	105	
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile	110	115	120	
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu	125	130	135	
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val	140	145	150	
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp	155	160	165	
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp	170	175	180	
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu	185	190	195	

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	200	205	210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	215	220	225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	230	235	240
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	245	250	255
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	260	265	270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	275	280	285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	290	295	300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	305	310	315
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	320	325	330
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	335	340	345
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	350	355	360
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	365	370	375
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	380	385	390
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	395	400	405
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	410	415	420
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					425	430	

<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 1869, 1887
 <223> unknown base

<400> 516
 ctccacaggt gtccagcgcc cagaatgcgg cttctggtcc tgctatgggg 50
 ttgctctgtg ctccacaggt atgaagccct ggagggccca gaggaatatca 100

gcgggttcga aggggacact gtgtccctgc agtgcaccta cagggaaagag 150
 ctgaggggacc accggaagta ctggtgcagg aagggtggga tctctttctc 200
 tcgtgtctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250
 agggcagggt gtccatccgt gacagccgcc aggagctctc gctcattgtg 300
 accctgtgga acctcacct gcaagacgct ggggagtact ggtgtggggt 350
 cgaaaaaagg gggcccgatg agtctttact gatctctctg ttctgttttc 400
 caggaccctg ctgtctctcc tccccttctc ccaccttcca gcctctggct 450
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaaccg agccccagg 500
 attgaattct cctgggctct acccggcagc caccacagcc aagcagggga 550
 agacaggggc tgagggccct ccattgccag ggacttcca gtacgggcac 600
 gaaaggactt ctacgtacac aggaacctct cctcaccag cgacctctcc 650
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 aggacaccag tccagctctc agcagtggca gctctaagcc cagggtgtcc 750
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 gtcagccgca ggctgatcg cttctgcag ccacctgtc ctgtggagaa 850
 aggaagctca acagggccag gagacacaga ggaacgagaa gttctggctc 900
 tcacgcttga ctgcggagga aaaggaagcc ccttcccagg cccctgaggg 950
 ggagctgatc tcgatgcctc ccctccacac atctgaggag gagctgggct 1000
 tctogaagtt tgtctcagc tagggcagga ggccctcctg gccaggccag 1050
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagctttc 1100
 cacctcagcc tcagagtcca gctgcccgga ctccagggt cccccaccc 1150
 tccccaggct ctctctttgc atgttccagc ctgaacctaga agcgtttgtc 1200
 agccctggag ccagagcgg tgcccttgct cttccggctg gagactggga 1250
 catccctgat aggttcacat ccctgggcag agtaccaggc tgctgacct 1300
 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350
 aggaactcct gggcctcatg ccagtgctg gacctgctt tctccact 1400
 ccagacccca cttgtcttc cctccctggc gtctcagac ttagtccac 1450
 ggtctcctgc atcagctggt gatgaagagg agcatgctgg ggtgagactg 1500
 ggattctggc ttctctttga accacctgca tccagccctt caggaagcct 1550
 gtgaaaaacg tgattcctgg ccccaaccaag acccaaaaa accatctctg 1600
 ggcttggtgc aggactctga atttaacaa tgcccagtga ctgtcgact 1650
 tgagtttgag ggccagtggg cctgatgaac gctcacacc cttcagctta 1700

gagtctgcat ttgggctgtg acgtctccac ctgccccaat agatctgctc 1750
 tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800
 caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
 acagaagtgg ttgcctttnc catttgccct ccttggncca tgccttcttg 1900
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 gggttacttg cctatgggtt ctggtggcta gagagaaaag tagaaaacca 2000
 gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050
 ctgaagtgta ctccgagtc agcccccttg agaaggggtc ggggggtgtg 2100
 gtaagtagc acaactacta tttttttct tttccatta ttattgttt 2150
 ttaagacaga atctcgtgct gctgccagg ctggagtga gtggcacgat 2200
 ctgcaaac tcgcctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250
 gagttagctg gattacaggc acgcaccacc acacctggct aatttttgta 2300
 ctttttagtag agatggggtt tcacatgtt gccaggctg gtcttgaact 2350
 cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400
 caggcatgag ccactgtgtc tggccctatt tcctttaaaa agtgaaatta 2450
 agagtgttc agtatgcaa acttggaag atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttctg 2550
 tttgtgttac ttcttccac tcttttctc ttacataat ttgccggtgt 2600
 tctttttaca gagcaattat cttgtatata caactttgta tctgccttt 2650
 tccaccttat cgttccatca ctttattcca gcacttctct gtgttttaca 2700
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaa 2749

<210> 517
 <211> 332
 <212> PRT
 <213> Homo Sapien

<400> 517
 Met Arg Leu Leu Val Leu Leu Trp Gly Cys Leu Leu Leu Pro Gly
 1 5 10 15
 Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
 20 25 30
 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp
 35 40 45
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
 50 55 60
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met
 65 70 75

Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	
				80					85					90	
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	
				95					100					105	
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	
				110					115					120	
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	
				125					130					135	
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	
				140					145					150	
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	
				155					160					165	
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	
				170					175					180	
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	
				185					190					195	
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	
				200					205					210	
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	
				215					220					225	
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	
				230					235					240	
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	
				245					250					255	
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	
				260					265					270	
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	
				275					280					285	
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	
				290					295					300	
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	
				305					310					315	
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val	
				320					325					330	

Ser Ala

<210> 518
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe
 <400> 518

ccctgcagtg cacctacagg gaag 24

<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggt gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ggtgcaggaa gggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgcaca gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcotgggt gggc 24

<210> 523

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 523

gtagtgataa agcatcggca tgggtgcagg agcagtgaca ggc 43

<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe
 <400> 524
 aatctcagca ccagccactc agagca 26
 <210> 525
 <211> 25
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 525
 gttaaagagg gtgcccttcc agcga 25
 <210> 526
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 526
 tatccaatg cctccccact gctc 24
 <210> 527
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 527
 gatgaacttg gcgaaggggc ggca 24
 <210> 528
 <211> 30
 <212> DNA
 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 528
 agggaggatt atccttgacc tttgaagacc 30
 <210> 529
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 529
 gaagcaagtg cccagctc 18
 <210> 530
 <211> 18
 <212> DNA

<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 530
cggtccctg ctctttgg 18
<210> 531
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 531
caccgtagct gggagcgcac tcac 24
<210> 532
<211> 18
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 532
agtgtaagtc aagctccc 18